Marketing & Postharvest Research in Eastern and Central Africa

FOODNET

Foodnet

Marketing & Postharvest Research

in Eastern and Central Africa

First Interim Steering Committee Meeting

ILRI Campus
8-10 November, 1999

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1. Purpose of the Meeting

The aim of this workshop is for the interim steering committee and partners to develop a common understanding of the FOODNET strategy and future prospects for market analysis and agro-enterprise development in the region.

As these issues cut across all the ASARECA commodity networks, FOODNET is seeking to foster strong linkages between the various partner institutions and this first interim steering committee meeting has been planned to provide partners, from the region, with the opportunity to debate their ideas, needs and expectations from the FOODNET programme.

It is hoped that the results from these deliberations will provide new insights to fine tune the strategy, develop the guidelines for the research activities and create the framework for the innovative partnerships that are required for successful market driven research.

To achieve this goal there are a number of tasks

TASKS **8 November, 1999**

Task 1 Workshop participants to familiarise themselves with the FOODNET strategy.

Task 2 To determine where the most apparent and productive linkages can be developed between FOODNET and the commodity networks as indicated by the network co-ordinators and discussions.

Task 3 To design the basic outline for the market research strategy. This will be discussed in three working groups which have been divided into market commodity groups as follows (i) Root, Tubers and Bananas, (ii) Grains and Pulses (iii) Others which will include higher value crops, niche crops and livestock options.

Task 4 To design a programme for the implementation of enterprise development schemes based on ongoing activities, potential linkages with the private sector, training needs and market information.

9 November, 1999

Task 5 Debate and harmonise ideas from across the commodity groups

Task 6 Discuss how the activities within the network and the network as a whole, should be monitored according to specified targets and performance indicators.

Task 7 Development the guidelines for the research proposals. The most important aspect being that the guidelines should direct the respondents towards the "market oriented" objectives of the networks, and not simply to fund work with is of interest of individual partner agencies.

10 November, 1999

Task 8 Review the guidelines and elect a sub-committee to review proposals. This group should meet in first quarter of 2000.

Task 9 Elect members for the second steering committee. To meet in November 2000

Task 10 Review training needs.

Task 11 Initiate discussions on how networks can work together to attain EU funding in competitive grant scheme and access other funding opportunities.

Task 12 Discuss ideas for inclusion in the information system to strengthen cross-cutting linkages.

2. Background to ASARECA and the Development of Networks within the ASARECA portfolio

Professor G. Mrema.
Executive Secretary of ASARECA

ASARECA (Association for Strengthening Agricultural Research in Eastern and Central Africa) is a Sub-Regional Organisation for the National Agricultural Research Systems (NARS) in the 10 Eastern and Central Africa countries, whose membership includes *Burundi, D. R. Congo, Eritrea, Ethiopia, Kenya, Madagascar, Rwanda, Sudan, Tanzania and Uganda.*

ASARECA is a NOT-FOR PROFIT, NON POLITICALCAL ORGANISATION. Together with SACCAR (Southern Africa) and CORAF (Western Africa), it represents the agricultural research systems in Africa in Global Fora. ASARECA evolved from the informal Committee of Directors established in 1987/88 to superintend the activities of the regional networks to a formal association as follows:

- 1991/93 Studies on Framework for Action (FFA) for Agricultural Research in ECA region undertaken by SPAAR/IGAD.
- November 1993: Stakeholders Meeting convened by IGAD/ SPAAR held in Kampala approves the six principles of the FFA.
- September 1994: Directors of NARS in ten countries sign MoA establishing ASARECA.
- October 1994: Secretariat Offices established in Entebbe.Uganda.

Evolution of ASARECA

ASARECA has so far functioned through two operational frameworks:

The first framework was a two year operational framework approved at the founding: meeting, in Addis Ababa in September 1994 which covered the two years period, 1995 and 1996. During this period ASARECA developed and was given approval for its structures of governance including the constitution and bylaws, etc. In this phase the secretariat was established in Entebbe, Uganda. Priority setting and some programme development activities. Limited programme implementation through the first generation. networks which were brought under the umbrella of ASARECA.

1. PRAPACE for Potatoes For Sweet Potatoes.
2. AFRENA for AgroForestry in East Africa Highlands.
3. EARRNET for Root crops.
4. ECABREN for Beans .

The second three-year operational framework was approved at the 5th CD meeting held in Entebbe in September 1996, for the period fro, 1997 to 1999. During this period ASARECA developed its Strategic Plan for Regional Agricultural Research and then went onto develop the "Implementation framework for the Strategic Plan". The plan involved the programme development of activities for ongoing networks and new networks/ programmes. At this time ASARECA also developed a sustainable financing mechanisms and worked towards a consolidation and strengthening of regional programme governance and consultation mechanisms.

The Strategic Plan was approved in September 1997 and since then ASARECA has been developing the implementation framework, programme development activities and financing mechanisms.

A third phase began in 2000 to 2004 in which activities of Phase I and II are further consolidated, e.g., Competitive Grants Scheme to be established and monitoring programmes to be implemented.

ASARECA comprises:

- The Committee of Directors (CD) which superintends its activities and provides policy guidance.
- The Secretariat, which services the CD and the regional networks/programmes.
- The regional networks and programmes, which are implemented by different agencies.

ASARECA does not aim to replace National Research efforts but seeks to provide a platform to add value to national research efforts by initiating, facilitating and implementing regional collaborative programmes which:

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- Promote efficiency through attainment of economies of scale and scope by pooling and sharing resources.
- Create common pools of knowledge to avoid duplication and repetition.
- Encourage maximum technology and information spill-overs and spill-ins from' one country to another.
- Improve the quality of science and research by linking isolated national scientists to the regional and global research community.
- Critical to addressing research issues that cross national boundaries (e.g., ACMV in Lake Victoria and EARRNET).
- Facilitate training and diffusion of new research technologies.
- Adds value also to efforts of other partners, e.g., IARCs, ARIs, donors, etc.

Types of Networks:

I. From a 'functional' perspective:

a) Information exchange networks - facilitate exchange of information;

b) Scientific consultative networks – where participants focus on research on common priorities.

c) Collaborative research networks - where there is joint planning and monitoring of research and sharing of tasks.

2. From an "organizational" perspective

a) Central source networks - which are established, led, and entirely managed by IARC's to facilitate the transfer of their technologies

b) Regional networks - which are established, led and facilitated by regional organisations such as ASARECA, SACCAR, etc.

c) Professional networks which are established scientific societies, e.g., Soil Science Society of Eastern Africa.

Within this framework - FOODNET essentially falls under 1. c) and 2. b).

ASARECA Networks and Programmes

First Generation Commodity Networks were established in the 1980's and brought under the umbrella of ASARECA in 1994. these included:-

AFRENA -AgroForestry -ICRAF
PRAPACE - Potato and Sweet Potato - CIP
EARRNET - Root crops –IITA
ECABREN - Beans – CIAT

Second Generation Commodity Networks established in 1990s

BARNESA ... Bananas - INIBAP
A-AARNET - Livestock – ILRI /GL-CRSP
ECAMAW - Maize and Wheat – CIMMYT
ECARSAM - Sorghum and Millet - ICRISAT

Cross Cutting Projects/ Programmes/Networks

African Highlands Initiative (AHI) - ICRAF - NRM in ECA Highlands
AfricaLink - E-mail Connectivity (ICRAF)
ECAPAPA - Agricultural Policy Analysis (ASARECA Secretariat)
FOODNET - PostHarvest -IITA (1999)
Technology Transfer Project (CIP)

New Networks/Programmes

ECSARRN –Rice Research – IRRI/WARDA
CORNET - Coffee Research - CABI
EAPGREN - Plant Genetic Resources - Nordic Gene Bank/ IPGRI
SWMnet- Soil and Water Conservation - ICRISAT/ IWMI
RAIN - Information and Communication - CTA
Strengthening Management Capacity of NARS - ISNAR

MODALITIES OF REGIONAL COOPERATION IN AGRICULTURAL RESEARCH

There are four levels of regional Co-operation

1. Programmes e.g. Stand alone project, created to tackle a specific problem such as email connectivity - AFRICA LINK; or rehabilitation of damaged NARS, e.g., SEEDS OF HOPE.

2. Programmes established to build capacity in a thematic areas where all member NARS are quite weak e.g. ECAPAPA. These programmes will eventually evolve into networks.

3. Initiatives established in thematic areas where there is some capacity in the NARS but not systematically coordinated e.g. the Natural Resources Management of the AFRICAN HIGHLANDS INITIATIVE (AHI)

4. Networks where each NARS has a clearly defined national programme and they agree to work together to achieve economies of scale and scope and reduce duplication of efforts. Within this category there are three levels of network

1. Information exchange networks which concentrate on information exchange
2. Consultative networks where each partner works independently but the work is co-ordinated
3. Collaborative networks where there is joint planning and implementation of research programmes.

The programme / project development process that ASARECA has used is as follows:-

- Convene a meeting of all key researchers working on a commodity e.g. sorghum and millet 1995, policy analysis 1997, Livestock 1996 and Bananas 1996.
- This meeting identifies researchable constraints and ranks them according to priority importance for the different agro-ecological zones
- This meeting sets up an interim Steering committee which then develops the network programme and protocols including the constitution and sets out a plan to establish a portfolio of project to fund.
- The interim steering committee is facilitated by the ASARECA Secretariat to meet jointly with collaborating partner institutions. Once the network protocols have been developed these are submitted to the ASARECA CD for approval.
- Project proposal are solicited by the co-ordination office / implementing agency and these are approved by an interim steering committee and thereafter submitted to the donors. Once the donors have indicated a willingness to fund the projects a stakeholders meeting is convened to consider all the operational details and elect a permanent regional steering committee (RSC).

The implementing agencies, usually an IARC and NARS then implement the projects following agreed / approved operational details under the superintendence of the RSC and the ASARECA CD. Thereafter the RSC reports once per year to the ASARECA CD.

COMPONENTS OF A NETWORK

- Network members - in NARS / IARCs who implement the research work.
- Network Coordinator - either regionally appointed or supplied by implementing agency on agreement with ASARECA.
- Network Steering Committee (RSC), which superintends the activities of the network including the approval of the annual Work Plan, allocation of resources, progress reports, etc.
- ASARECA Secretariat - Ex-Officio member of every RSC; assists in planning provides policy information, facilitates M & E, etc.
- ASARECA CD - approves Annual Work Plans and Progress Reports, makes decisions on starting and dissolving of networks.
- Network Resources:
- Participating NARS institutions provide resources like salaries of staff, laboratories, fields, etc. Usually the largest component.
- IARCs and ARIs provide staff; information. germplasm and training.
- Donors provide coordination and operational funds for joint research projects. Administered and accounted for by implementing agencies normally IARCs.

Composition of a regional steering committee

Steering committees are normally appointed by the CD taking cognisance of individual member expertise, geographical spread and commodity / factor / institutional issues. The Steering committee usually consists of up to:-

- 5-10 members from national Programmes, Universities etc..
- 1-2 representatives of the private sector, NGOs etc where this is feasible of necessary
- Ex- officio members EX-OFFICIO MEMBERS:
- Executive secretary of ASARECA
- Representatives of donor agencies funding the network or projects within the network
- Representatives of implementing agencies, IARCs and ARIs which are active in research on the commodity / factor / thematic area
- Network Co-ordinator

Tenure of the committee is usually 3 years, with chairmanship elected or appointed by the ASARECA CD. Usually ISC presents a slate of candidates to the CD. It is suggested that networks avoid having a large steering committee to reduce costs.

3. Background to Foodnet (Summary page)

Project Title: Postharvest and Marketing Research Network for Eastern and Central Africa (FOODNET)

The FOODNET project will develop a new type of regional agricultural research and development network based on market research and sales of value added products. Researchers working with FOODNET will conduct market surveys to identify market opportunities and thereafter work in close collaboration with public and private sector partners to develop and deploy innovative postharvest technologies and products to supply the identified markets for both new and existing markets. Impact in the agricultural sector will be achieved through integrating market studies, technologies and processing groups to develop agri-enterprise projects, which will generate increased income from sales of value added products. To build capacity in this type of research, the network will provide regional training in market studies and agro-enterprise development to accelerate the process of change to market oriented research. To facilitate regional information flow, FOODNET will also develop a postharvest information system, which will be available via the internet, CD-ROMs and a biannual newsletter. This document is a work-plan for year 1, which will develop the full programming and implementation of the network over the five year period.

Overall Project Goal:- Strengthening regional capacity in value added, agro-enterprise technologies for increased income, improved nutrition and sustainable food security in eastern and central Africa

Project Purpose: To identify market opportunities for existing and novel, value added products, and optimise appropriate postharvest technologies to enhance the income generating capacity of small and medium scale entrepreneurs from the private sector and promote products to improve nutrition.

Project Partners: ASARECA networks, with initial links to EARRNET, PRAPACE, BARNESA, ECABREN, ECASAM, Research Institutes and National programmes, Universities, NGOs; CBOs, farmers, processors, engineers manufacturers and other stakeholders within the ASARECA region.

Project Objectives:-

1. – Enterprise Development

1.1. Identify market opportunities for increased sales of value added products.
1.2. Identify genes governing nutritional / processing quality for germplasm enhancement.
1.3. Identify, adapt and promote improved postharvest technologies with private sector partners
1.4. Diversify product range from locally available crops for market expansion and improved nutrition

2. Capacity Building

2.1. Provide training to strengthen the capacity of the Network to deliver profitable agro-enterprises
2.2. Develop postharvest information systems for increased access, flow and exchange of information
2.3. Catalyse the process of change from production to market oriented research in partnership with the ASARECA networks and private sector partners
2.4. Enhance local, regional, Inter-centre and International co-operation in postharvest activities

3.1 Introduction to FOODNET

In contrast to all other continents, per capita food production in Sub-Saharan Africa (SSA) has declined on an annual basis since 1960. Rising food deficits are currently offset by food importation and food relief programmes. Increasing food and transport costs, combined with rising populations indicate that African governments will face increasing food debts unless new mechanisms are found to stimulate local crop production. Current predictions indicate that in 2020, the population in SSA will exceed 1 billion, with 40% of the people living in urban centres by the year 2000. These figures indicate huge increases in food requirements in the near future. The challenge for agriculturalists is how to stimulate farmers to produce more food on a basis which is competitive with world market prices, and, at the same time enable farmers and processors to supply consumers with a range of locally made food products. These products should include high volume, low cost foods for the poorer sections of society, as well as high value, processed goods for the rapidly growing and urbanising population.

Developing capacity in crop processing technologies has successfully catalysed the crop production – food delivery systems in other parts of the world. Simple processing methods can transform perishable crops and cereal / grain crops into a range of storable, value added products, which meet the needs of expanding markets. Successful crop processing projects in Asia, Latin America and western Africa, show that farmers can rapidly increase their production as new markets emerge and that developing a demand driven approach to the production system provides a sustainable process for development. An example of the dramatic effects that processing can have on local production and diet was demonstrated in Nigeria. Approximately 30 years ago mechanised cassava processing was first introduced into Nigeria, this enabled farmers to transform a bulky perishable root crop into a storable, low cost food known as "gari". Since this time gari, and another cassava flour product known, as "lafun" have become national dishes. To supply millions of rural and urban consumers with these products, Nigeria has become the world's largest cassava producer, and this technology is spreading into neighbouring countries. The example of gari processing highlights the ability of African farmers to meet major increases in market demand, when there is a practical market opportunity to exploit and a suitable technology to facilitate the task.

The aim of this project is therefore to work in collaboration with a range of public and private sector partners to evaluate the markets within the food systems of the ASARECA region and deliver catalytic technologies, that will enable farmers and entrepreneurs to exploit profitable market opportunities, and where possible, to incorporate novel approaches for improved nutrition. The philosophy being that food production, and hence food security, can only be raised in a sustainable manner when it is market driven and catalysed by innovative technologies. Complimenting crop production systems with profitable processing technologies is an effective means to achieve this goal.

Key elements in the FOODNET implementation plan

The planning team proposed that FOODNET will take a lead role in specific areas of research, particularly related to commercialisation, and provide a general cross-cutting role with respect to training and information exchange.

Enterprise development

FOODNET will take a lead role in developing market driven, enterprise projects based on value added, processed products in collaboration with partners from EARRNET, PRAPACE, BARNESA, ECABREN and ECASAM. According to ASARECA, root crops such as cassava and cereals such as millet, are particularly under utilised in the East and Central African region, compared with other parts of Africa and there is existing capacity in terms of activities, personnel and facilities to undertake this type of research and development. The FOODNET partners will use the initial enterprise schemes as a learning tool and as capacity develops, the FOODNET partners will use their acquired agribusiness skills to progress onto a range of other commodities and products, according to the market and NETWORK demands.

Over time FOODNET will develop a portfolio of enterprise projects based on existing activities and new project proposals as proposed by the regional partners. The project portfolio within FOODNET will be co-financed via a competitive grant scheme that will provide annual funds of US$3,000-14,000 to approved projects. The projects, which will be open to all stakeholders to propose, will be reviewed by

the FOODNET steering committee meeting and selection will be based on market potential, potential for impact, levels of co-funding and the group's ability to undertake the research.

Training

To support and stimulate the development of enterprise projects across the commodity based networks; FOODNET will undertake specific types of training. A regional workshop will be held in the first year to bring together national representatives for the enterprise development projects. Regional training courses aimed at the commodity network partners, will be held in market oriented training including market analysis, agro-business skills and approaches to adaptive / participatory research. These training courses will serve to strengthen market led research within the region. In-country training courses will be held to support the development of the local enterprise teams. The in-country training will be field based and will be conducted at the village / processor site, directly with the implementing partners.

Information systems

Due to the increasing ability to store and relay information using electronic techniques, FOODNET will place considerable emphasis on the Internet as a tool for information sourcing, interaction and storage. FOODNET will either create or link to an ASARECA website to provide a dedicated information resource and also serve as a gateway to other postharvest and market related websites, such as the FAO, INP*h*O website, Universities, such Kansas State University, International centres, specialised NGO databanks and related Agri-business projects.

The information service will be geared towards the promotion of innovative technologies and market data. For example the website can be used to show in picture format, the available technologies for crop and food processing in the region, provide data on their performance, cost and supplier / fabricator. The increased access to information offered by the use of the internet and email listservers will help to accelerate the spread of ideas and support linkages with partners in a range of research and development projects. Greater access to information will significantly improve preliminary literature reviews, and will avoid unnecessary research and simultaneous duplication of research, which is currently a common event.

Regional research costs will be reduced through improved awareness of activities and an interactive information system can significantly improve joint planning activities and, in time, will provide a powerful tool to facilitate collaborative project work. Although there is constraints to the system at present in terms of internet access, connectivity in Africa is developing rapidly and within the lifespan of this project it is envisaged that internet access will be the most cost effective means of communication. During the interim period, FOODNET will develop capacity to record CD ROMs with specific information requested by the partners such as documentation, virtual and photo libraries and formulations for products and best practise methods for analysis and implementation. Success in this aspect will depend much on gaining strong linkages with other projects such as the INP*h*O project at FAO Rome and this will be done in close collaboration with the Postharvest programme at Kawanda station, Uganda, which has been designated as the regional INP*h*O centre.

As experience is gained the website will also provide market information and use search engines to link partners through listservers to requested information. The website will also develop catalogues of companies involved in processing and trade and list advertisements for commodity trading for export sales of African commodities. Commodity trading on the Internet is a new and interesting area of trade negotiation. This system has several advantages in that the offers are transparent and open to a global audience. For many African traders and businesses this may offer a unique opportunity to access international markets. FOODNET can provide a gateway service to these opportunities and assist private sector partners in the region to have access to the global market.

3.2 FOODNET's role within the ASARECA strategy

This project is formulated to enable network partners to develop a robust, market oriented approach to their research, focussing on market identification and the delivery of value added processing techniques and new or improved products to private sector partners.

This objective fully supports the new strategic goal for ASARECA; "**to enable agricultural research systems in the region to play a leading role in promoting market oriented agriculture"**, with the primary objective of "**promoting regional economic growth by generating and disseminating agricultural technologies which both create markets and respond to existing economic opportunities"**.

As identified by the ASARECA strategic review team, the current capacity for agro-enterprise development is weak in Eastern and Central Africa. For example, perishable crops, particularly root crops, are still regarded as famine reserves rather than primary resources for agri-business. This project will endeavour to redress this situation and develop markets for a range of products, by providing market analyses and supplying new technologies and improved or novel products to promote the use of local crops for increased sales into the food, feed and industrial markets.

3.3 Main problems / tasks to be addressed by FOODNET

a) **Lack of a market oriented approach to research**:- Agricultural research, particularly that undertaken by the national research programmes, is often conducted in isolation from market trends. Research is typically based on disciplinary themes with little regard for the business opportunities and problems faced by farmers or processors. For agricultural research to be more effective in Africa, it is vital that a more business like approach is incorporated into the research strategy such that research investment is based on identified market opportunities and that market returns can be linked to research costs.

b) **Limited product range to stimulate production in East and Central Africa**:- When farmers are limited to a narrow product range, i.e. selling fresh primary products according to seasonal production cycles, their possibilities to gain from increased production are poor, particularly with perishable goods having low value. Improving product quality or developing new products offers farmers the possibility to sell their goods into either a higher return market or into a new market. In most countries, considerable investments are made by public and private sector agents to find new market opportunities for a given commodity. A diversified product range is an essential component towards market expansion and increased demand.

c) **Lack of Crop Processing Technologies in East and Central Africa**:- In East Africa, most crops are either sold or consumed in the fresh form. Market opportunities are generally limited and returns low. Processing crops into added value food, feed and industrial products offers farmers the ability to open new markets and avoid seasonal price trends. However, crop processing is much less common in eastern and central Africa than it is in other parts of the world. Introducing and adapting proven processing technologies to local conditions will enable farmers and processors to open new markets, which will create the opportunity for increased income and provide farmers with incentives to intensify production.

d) **Escalating future food demands in urbanised Africa***:*-The rapid growth and urbanisation of the African population indicates the inescapable need for significant increases in food supplies. To avoid, even greater dependency on food importation and relief, farming communities needs to supply low cost food, year round which is transportable, has a relatively long shelf life and is simple and quick to prepare in the home. Supplying urban centres also requires a food delivery system which can cater for a range of market needs, including, (a) low cost high energy foods, (b) low cost high nutrition foods and (c) higher value secondary food products.

e) **Poor co-ordination in research and delivery***:*-Agricultural research and development is often carried out by national, regional, and international organisations through many separate and poorly co-ordinated activities. A focus on community-level postharvest projects in carefully targeted production / marketing zones will encourage closer collaboration between the many partners to meet

common goals. This project will provide cross-cutting support to the existing research networks with a focus on market identification for selected commodities and the delivery of Agro-enterprise technologies.

f) **Lack of business enterprise in technology delivery pathways**:- In many cases technologies are developed on-station with little interaction with the target group. Technologies made in this fashion generally require significant adaptation, and extension agents are often ill equipped to tailor a product or process to clients needs. To overcome these issues, technologies need to be developed and tested in collaboration with the end user. The test phase should also include evaluation of real market performance, using economic indicators such as gross margin and internal rates of return. This economic information is essential to enable private sector partners to evaluate the profitability of the technology and use this data to access credit for replication of the technology.

g) **Addressing the needs of vulnerable and differing socio-economic groups**:- As with all technology development and transfer projects the effects of the project on the beneficiary / target groups needs to be closely monitored. The international centres have a policy geared towards equity in regard to gender / age in project formulation and implementation. These issues will be seriously addressed and reported upon as part of the monitoring and evaluation strategy. Also, there is a clear recognition that the needs and abilities of groups differ according to their economic status, i.e. whether they are subsistence farmers or are at a entrepreneurial level. In each case appropriate technology will be tailored to client needs.

3.4 Project beneficiaries

Project benefits and beneficiaries

This project will provide both the framework and pilot projects necessary to establish and catalyse new and improved crop processing technologies in East and Central Africa. As the project will be demand oriented the beneficiaries will span the market chain including, producers, processors, retailers and consumers. Direct benefits will be identified as

Benefits

1. Increased market oriented postharvest research and development capacity in the region
2. Supply of market information particularly for low value crops, which are not published in newspapers
3. Supply of new technologies to the farming / processing community
4. Greater marketing opportunities for farmers, retailers, processors leading to increased incomes.
5. Increased demand for agricultural produce from farmers.
6. Increased food options for consumers in terms of price, product range and nutritional value
7. Increased labour requirement at the rural and urban levels.
8. Improved supply of low priced staple food, or high value products for urban consumers.

Beneficiaries:

The groups developing the community based enterprise projects, will benefit from the use of processing technologies in terms of increasing income, better nutrition and time saving through better efficiency. These benefits accrue to various players, for example:- small-scale farmers who supply raw material for processing, rural labour, rural intermediaries and assembly groups, urban wholesalers, rural and /or urban retailers, rural and /or urban consumers, secondary processors. At the project level this will include:-

1. **ASARECA - Networks - NARS**:-will develop the capacity to conduct novel research and implement commercially based, market oriented commodity development projects.
2. **Farmers** - with a range of social advantage, will observe and be involved with activities that will enable them to add value to their primary resource. Actively being involved in the market expansion of a selected crop will provide farmers with the necessary market information which will encourage them to increase production and will lead to improved rural incomes

3. **Processors / entrepreneurs**:- will be able to expand their utilisation of indigenous crops, reducing their costs of production and their dependency on imported cereals. In the case of root crop processing, the use of cassava, sweet potato and yam will also enable more entrepreneurs to develop and tailor products to their consumers needs

4. **Consumers**: both rural and urban consumers will have a wider range of foods made from local crops, and incorporation of novel flours into established markets such as confectionery, or high nutrient foods, will also enable more of the poorer sector of society to purchase such products.

5. **Government officials**:- as part of the project mode, local administrators will be involved in the project, to observe the potential of processing on storage, sales and market expansion and also to observe the effects of policy on farming options. This provides the project with a means of lobbying higher offices with real information, for example the effect of taxation rates on access to mechanisation.

Table 1 Summary of FOODNET's Value adding benefits to the system

Shift towards market oriented research and development

1. Developing activities with a focus on markets rather than disciplinary outputs
2. Enhance linkages with the private sector
3. Strengthen NARES, particularly the weaker groups in postharvest research and development
4. Avoid unnecessary duplication of technology / recipe developments
5. Co-ordinate regional activities to effect gains and avoid duplication and re-invention
6. Provide a rapid service for dissemination of information
7. Provide access to new and relevant information, including price data and export opportunities
8. Work with partners to learn new approaches through collaborative projects
9. Provide a regional lobby group for access to funding and enhance collaborative research
10. Provide a rallying point to raise the profile of postharvest within the R&D agenda
11. Encourage partners to record and publish their data

Improved international and regional linkages

1. Provide greater linkages for postharvest researchers within and across networks
2. Provide linkage opportunities with International centres, bilateral agencies, advanced laboratories and International Food agencies through a new initiative entitled, the "Global Post-Production Forum"
3. Provide linkage opportunities with International NGOs and local CBOs

Improved postharvest / marketing services to researchers, farmers, processors and traders in the region

1. Provide information to farmers, processors and their organisations
2. Develop technologies in collaboration with farmers and processors
3. Link farmers and processors with emerging, new and expanding markets

3.5 Project Partners

National level: Research institutes, universities, NGOs, CBOs, farmers, farmers groups, processors and small-medium scale entrepreneurs involved in the marketing chain.

Regional level ASARECA networks, with initial links to EARRNET, PRAPACE, ECABREN, ECASAM, Universities, NGOs; CBOs, farmers and processors within the ASARECA region and the Technology Transfer Project of ASARECA

International level: International Agencies including FAO, CTA and International Research Centres, including IITA, CIP, CIAT, CYMMT, ICRISAT, collaborating bilateral agents such as NRI, CIRAD and GTZ, Universities including Kansas State, Mississippi and Texas A&M, International

ASARECA

In 1994, a committee of directors from ten NARS in East and Central Africa, supported by the Special Programme for African Agricultural Research (SPAAR), set out to extend and formalise their co-operation with the establishment of the regional agricultural research association, known as the Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA). This association aims to improve the relevance, quality and cost effectiveness of agricultural research and to establish and support mechanisms to improve collaboration among NARS and with international agencies in delivering new information and technologies to farmers. The strategy adopted by ASARECA is based on a market-oriented approach to research and development and FOODNET has been developed to fulfil this primary goal. The ten member countries involved in this initiative include:- Burundi, Eritrea, Ethiopia, Kenya, Madagascar, Rwanda, Sudan, Tanzania, Uganda and the Democratic Republic of Congo.

ASARECA Networks

Regional networks are a collaborative research strategy favoured by both ASARECA and IARCs as they provide effective mechanisms to work with several national partners who often face common problems. Networks focus on strengthening national agricultural research systems (NARS) through the provision of technical support and small complementary funds for critical areas of research. The Network's regional project portfolio is designed to ensure more efficient use of limited resources by avoiding duplication and enabling each NARS to attain greater specialisation in its research agenda. Network research projects are supported by information exchange through training workshops, field visits, publications, technology transfer and e-mail / internet facilities. These activities ensure that the smaller or weaker NARS of the region benefit fully from collaboration. The networks provide strong links to the IARCs for short-term and group training to strengthen research capabilities of NARS, and also facilitate access to experienced resource persons available in other NARS of the region.

International Agricultural Research Centres (IARCs)

The IARCs were established in the late 1960s as a global agricultural research and consultancy base to support the development of major staple crops and strengthen national agricultural research systems. International centres conduct strategic agricultural research on natural resources for selected commodities, with the aim of benefiting resource poor farmers while protecting or enhancing the natural resource base. Three centres, namely, IITA, CIP and CIAT, are particularly interested in the FOODNET proposal, as an innovative approach to stimulate crop production and increase farm gate incomes and are therefore strongly committed to supporting the success of this endeavour.

National research partners

National partners include agricultural research programmes, research Institutes, Government ministries, export promotion councils and Universities. Researchers will play the catalytic role in FOODNET, developing and adapting novel products, innovative technologies and making efforts to work in close collaborative with the private sector partners, including farmers, processors, village engineers and traders. The research agenda will be biased towards a near market approach, defining solvable problems and finding practical solutions, such that outputs are of immediate economic benefit to the client group. In this mode of action postharvest researchers will provide the technologies, which will enable farmers to

make the transition from traditional to modern methods, thereby reducing the drudgery of women and providing products that will both increase income and improve nutrition.

Development / extension partners

Development partners will include, NGOs, Government extension agents, CBOs, farmers groups, trade associations, manufacturing associations, credit handlers and bankers. The role of this group will be to assess research outputs and work with researchers to tailor products to market / client needs, i.e. the commercialisation of a research product. NGOs will be particularly important to the success of this project as they are already involved in micro-enterprise activities and have strong linkages with farmers groups and associations, which are geared towards income generating projects. For business development to be successful it is important that enterprise groups are well established and have the capacity for absorbing new technologies, NGOs can play a critical role in group development and day to day support. Community based organisations (CBOs) are also important partners as this type of group is generally highly motivated in seeking new opportunities and technologies to increase their income and well being.

Private sector partners

Private sector partners, ranging from farmers and farmers groups, to processors and small-medium size entrepreneurs are the most important group in terms of the success of this project. In on-going projects there is already a high degree of private sector involvement including farmers, small-scale processors, millers, flour retailers, engineering workshops, feed merchants and exporters. These partners are to various degrees involved in component activities and commercial processing and sales. The FOODNET project will lay greatest emphasis on developing stronger links with the private sector as this is the group who need to effect real changes within the Agri-business sector. Their involvement is therefore crucial to successful implementation of the research and delivery agenda.

3.6 FOODNET Implementation Strategy

Shifting to a market oriented research strategy

In Africa, research has traditionally taken a production orientation to improve yield. This strategy assumes that market demand exists for increased production and the starting point for the research agenda is the prioritisation of production constraints. Whilst this approach has been successful in the past, it is unclear whether this approach alone will continue to provide reasonable returns on research investment in the next 10-20 years. An alternative approach is to adopt a market oriented approach, where the market is the driving force in the system. In this case no assumptions are necessary and the starting point for the researcher is the identification of market opportunities for research and technology intervention. The advantage of taking a market-oriented approach to a project from the outset is that the research agenda and research themes, focus on factors which can be reflected in economic returns.

Given a project goal, which aims for increased revenue based on the sales of a particular product, the related work plans, time frames and indicators can take on an economic reality and the technology development becomes integral to the process of technology transfer. For processing projects to have the best possibility of sustainable success, there are obvious advantages in adopting a market-oriented strategy, as the work is involved with manipulating and supplying market demands. The following sections briefly describe the process of developing a market driven research agenda, towards the end goal of deploying agro-enterprise projects. The first two sections deal with strategy and the following sections detail the research issues.

The "Stage Gate" method for market analysis and product intervention

Taking an agricultural product from the ideas phase to commercialisation involves as series of decisions and actions based on economic, technical and organisational issues. The "stage gate" method is a management tool designed to assist a team in developing a marketing and research plan, whilst accommodating individuals from diverse organisations / backgrounds, **Figure 1**. The main assumption of this process is that the project's most important determinant is profit and that the project should be rejected at any one, of a series of stages and gates, if one of the partners or "gate keepers" questions / disagrees with the viability of the plan.

The group of people that make up a stage-gate team should include a person from, research, extension, marketing, production, processing, accountancy and distribution. For a typical agricultural product this would equate to a researcher, a Government / NGO extension worker, a farmer, an entrepreneur, and an accountant / economist. Obviously, all persons should be motivated towards the success of the project, but the team should work with the understanding that the market will only accept a product that is either in demand, fills a real economic gap or can be seen to create wealth. Marketing from a top down approach or with only a missionary zeal, is unlikely to succeed.

As a prelude to the process, the team should assess all current ideas on the drawing board and conduct in-depth market research to find the level of demand for a product and the alternatives. The team should find out what is available on the market and then develop a price / season profile, a list of competitive products and an accurate cost of the new technology relative to the *value adding factor*. It is widely accepted that adding cost to new products is easily achieved, but increasing value and profit with a new technology is more challenging. Successful new or improved products typically fit into two categories:-

(i) Pure added value, i.e. a product that clearly supersedes previous products,
(ii) Me Too, products that can do the same job, faster, cheaper and better

The introduction of a new "concept" product tends towards pure added value, whereas a product that is based on improved efficiency is more of a "Me Too" product. Agricultural products or technologies can include both of these activities as some products may be entirely new and others may be more efficient.

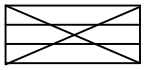
Although the stage-gate method is a useful tool to help partners focus on the market and avoid plunging into an investment in the absence of a considered economic framework, it should be noted that this method was designed to operate within a relatively sophisticated private sector system. Applying the same principles within a developing country economy requires some adjustments. As market uptake

periods may be relatively long term, and consumers will take time to become aware of a new product and due to restricted disposable incomes may be cautious in adopting new products.

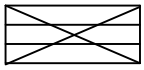
Hence, in addition to the purely profit driven goal, projects, particularly those aimed at small scale farmers and processors, require the inclusion of a fair degree of developmental perspective, i.e. to improve the lot of the rural and urban poor communities. Hence in addition to profit motive, the project should anticipate a slow initial rate of market impact as the project goals include broader issues such as food security, food safety, and access to high nutrient foods and the creation of new opportunities for entrepreneurs. The stage gate approach is therefore best viewed as a guide towards market intervention and this approach is extremely useful as it enables research teams to work together and change their approach or perspective towards technology intervention within the agri-business system.

Figure 1 Steps in the stage gate method a process approach to market intervention

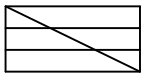
1. Ideas assessment **Collation of all ideas relating to postharvest products from a selected commodity**
(*At this stage an opportunistic approach is needed, i.e. this is not constraint driven, the group should assess all the possible products from a commodity and select those which show highest market potential. The team is working on the principle of championing a product)*

Proceed to next stage if all partners agree  *Open gate?*

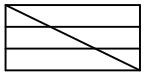
2. Desk study **A table of strengths and weaknesses of technologies**
(There are a number of marketing checklists, which provide a series of issues, which should be addressed before embarking on a project. These include product price, competitors, distribution, seasonal effects etc.)

Proceed to next stage if all partners agree  *Open gate?*

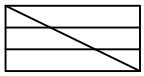
3. Assignments **Gather all relevant information especially from outside the system**
(This involves finding the common ground between the players in the group and identifying the project within the framework of local and national Mkts policy etc.)

Proceed to next stage if all partners agree  *Open gate?*

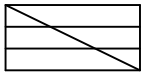
4. Project group **Select group and composition with a lead agent / a "champion"**

Proceed to next stage if all partners agree  *Open gate?*

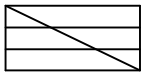
5. Pilot plant **Commercial partners gain information on running the scheme**

Proceed to next stage if all partners agree  *Open gate?*

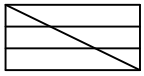
6. Critical issues **Assess the most precarious aspects of project, faultfinding mission**
(*the accountant is crucial at this stage*)

Proceed to next stage if all partners agree  *Open gate?*

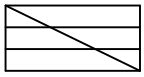
7. Investment proposal **Need to approach partners (Private sector, NGO, Donor)**

Proceed to next stage if all partners agree  *Open gate?*

8. Test marketing **Attention to tailoring the product to the market requirement**

Proceed to next stage if all partners agree  *Open gate?*

9. Launch /transition **Need to focus finances on sales, promotion and education**

Proceed to next stage if all partners agree  *Open gate?*

10. Impact **Monitoring and evaluation**

3.7 Research themes

This section details the themes involved in postharvest research, enterprise development and capacity building.

Enterprise development

1. Market analysis
2. Producer stage - Germplasm quality profiling / cyanogenesis
3. Transport stage
4. Storage stage
5. Crop processing stage / Product development stage
6. Market linkage / Sales stage
7. Technology transfer

Capacity building

8. Training
9. Information exchange
10. Market information systems
11. Linkage / networking

3.7.1 Enterprise Development

Market / sector analysis

The first stage in enterprise development is to identify market opportunities and market linkages for sustainable product sales. This starting point cuts across all commodities, but is often neglected in research agenda's. The first order of market analysis aims to identify which products and markets offer the best prospects for success, i.e., profit. At the same time the research team needs to be clear about "Who is the client ?" in regard to both the delivery of technology and those clients involved in market access, Where is s/he located?, What does s/he want? When does s/he want it and What price is s/he willing to pay?

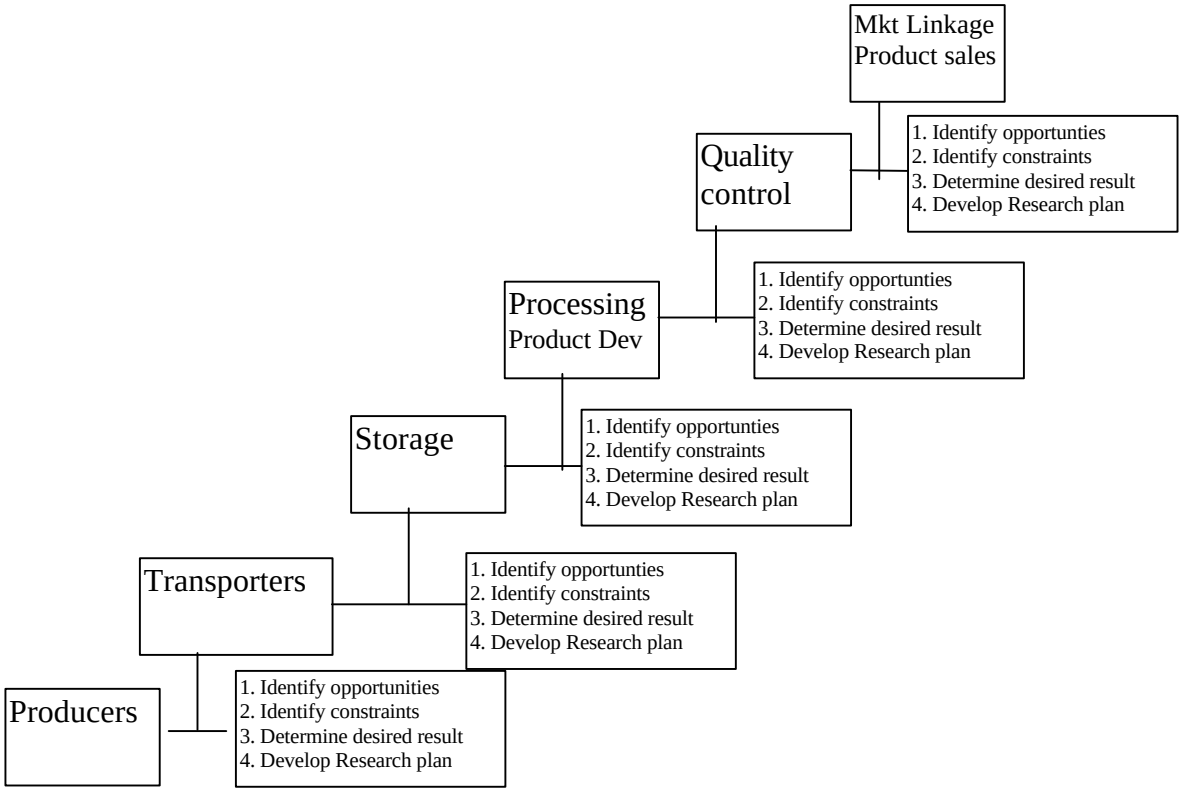
To answer these questions simple rural and urban marketing studies need to be undertaken. The results from this work will provide an understanding of specific market issues, the needs and potential of producers / processors to accept new technologies and the agents required to bring the value-added product to the consumer at a reasonable margin of profit. To assess profit one needs to have data on price differentials between primary and processed goods. The increment is the value addition; the profit will be this minus the costs of production and transport. The analysis should therefore address all costs and issues such as the type of market which will provide the best opportunity for a given commodity / product, i.e. a village, town, national, regional or export market. Market analysis should also determine what is available on the market and then develop a price / season profile, a list of competitive products and an accurate costing of the new technology**.** For locating a project and gaining an idea of the most competitive prices, it is useful to know spatial differences in price. However, one again, the most underlying factor is to clarify the "**added value component"** in the processing system and it is essential that the process is value adding rather than simply adding cost.

Social issues that also need to be resolved include the target group, i.e. whether the project should aims for highest returns, which may benefit a small number of people or seek opportunities that assist greater numbers of people but realise lower returns. The research agenda is then driven by the objective, i.e. pure profit, nutrition, food security or a mix of these objectives. Whatever the decision the research group needs to identify "*Pragmatic Opportunities*", from the market surveys. The group should also target, options that include simple products and processes and if possible involve a limited number of high volume clients and therefore show promise for high growth and rapid pay off.

Having established the objective, the product and the technology needs, the enterprise development team, should undertake a rapid sub-sector review involving the major players in the market chain, to determine the bottlenecks and researchable issues, which can overcome these barriers. A diagrammatic outline of a market chain / sub-sector approach for market analysis is shown in **Figure 2**. The product chain organisation indicates the various stages involved in the production, transport, processing and sale of a given commodity. Surveying a sample of people involved in each of these

transaction stages will highlight areas weakness in the market chain. At each stage in the chain a research programme can be designed to overcome the most pressing constraints. Understanding the product chain organisation will provide a sound knowledge of the sector and will assist the group in identifying research opportunities which could render the chain more profitable for most of the players. The research themes follow on from this type of analysis.

Figure 2 Product Chain Organisation and Research Planning



Producer stage evaluating germplasm quality

Production constraints have to a large extent been defined for most crops by the long term agronomic and germplasm development research which has been the core activity in agricultural research in the past 20-30 years. Postharvest research related to germplasm improvement aims to define rapid techniques for quality selection and incorporate these screening methods into standard selection procedures. Technologies and training required for specific physical and sensory analyses are already being disseminated to national programmes through linkages between International centres and networks such as EARRNET and PRAPACE. For example, for cyanide analysis in cassava IITA and EARRNET are providing technical support to national programmes in the form of enzymes, chemicals and training for technicians. Similarly CIP is working in close collaboration with a number of national programmes to facilitate the selection and market testing of high vitamin varieties and use of these varieties in nutrient rich products, Section 43.

Researchable issues at the germplasm level include:-

1. Screening new varieties for food value traits such as dry matter content.
2. Screening new varieties for food safety traits such as trypsin inhibitors, low Cyanide levels.
3. Screening new varieties for nutritional characteristics such as available protein and B carotene.
4. Screening new varieties for sensory qualities against market standards.
5. Screening new varieties for industrial traits such as starch yield and starch quality.

Transport stage

This is an area of market research that usually gains little interest, however it can prove to be a critical bottleneck in regard to on-farm transport and getting high volume goods to best priced markets. In a pilot cassava processing scheme developed by IITA in Uganda, transportation within the production zone was vital to maintaining produce supply to the processing centre and the project needed to invest in animal transport to overcome the in-field problems. For processing centres transportation needs to be determined well in advance of sales such that the processors can rent lorries at reasonable prices rather than loosing profit margins due to poor management. Research issues include:-

1. Identification of producers in high production, low risk production zones, with good road infrastructure
2. Animal traction / transport at the production zone, to supply the processing sites
3. Determination of transport costs and information on trucking schedules.
4. Synchronising harvest dates with demand from market / processors

Storage stage

Storage is problem for perishable crops, cereals and legumes crops and their products. For perishable crops, processing the high water content fresh products into dry goods offers one solution. However, as with dried cereals and legumes, storage of the dry goods can encounter other storage problems associated with rots, insect damage and the development of off colours and odours. Areas for research in this area include:-

1. Packaging materials
2. Processing efficiency for transformation of perishable crops
3. Storage structures
4. Determine least cost methods for storage subject to transportation, processing and other constraints
5. Examine increased shelf-life opportunities
6. IPM control of stored goods

Processing and product development Stage

Developing crop processing technologies and disseminating formulations for higher value products development are priority research and development areas for FOODNET and this project will focus on developing and adapting improved and new processes, products and innovative technologies for farmers and processors.

Although, in the global sense, there is already a great deal of processing equipment available for the major cereal and perishable crops, in East Africa, these technologies are either in limited supply, of exorbitant cost or not suited to small scale users. Similarly for more specialised types of processing, such as juice extraction, extrusion processing, starch extraction and oil refining, technologies are mainly confined to large scale manufacturers and local fabricators are currently unable to supply smaller scale equipment, that will enable farmers to access these more lucrative markets.

Processing technologies

The project team will therefore evaluate and adapt available technologies to meet the needs of small-medium scale processing, rather than develop new technologies. To cater for the different client groups and target a range of markets, processing technologies will include manual and powered equipment. In most cases new technology will be replacing or upgrading a traditional process and therefore benefits to the group are apparent in terms of efficiency and reduced drudgery. To avoid problems with sustainability, technologies will be assessed in perspective of the client group. The main point being whether the group should opt for low cost, lower output manual technologies, or whether it is more appropriate to accept credit or loans and shift to higher output mechanical processing techniques. Following a marketing checklist, can assist in assessing enterprise group needs and evaluating choices and prospects before funds are committed. Some of the technologies already being used and of interest to the FOODNET partners are shown overleaf, this selection indicates, the transition from traditional, to improved and power processing **Figure 3**. The selection also shows some products and technologies with

high growth potential in the ASARECA region. Areas of research / issues which need to be addressed include:-

1. Evaluate locally available technologies for processing and technology requirements of the enterprise group
2. Adapt improved or exotic technologies for processing with client group
3. Integrate and test processing techniques
4. Evaluate quality of primary and secondary products against market standards
5. Identify by-product transformation and uses
6. Cost and profitability analyses to assess the level of value addition

Product development is closely tied with processing equipment, particularly if the project aims is to sell primary goods, such as dried fruits, flours, composite flours, starch etc. For primary goods the main quality aspects relate to characteristics such as colour, odour, contamination. For sales of secondary products such as fortified traditional products, confectionery goods and snack foods, a more rigorous process of market evaluation and product testing needs to be followed. The first stage in product development involves a thorough evaluation of current market products, setting a clear objective for the new product, and then developing formulations for sensory analysis, consumer testing and linking with private sector partners to launch the product. Public sector, product development studies are prone to criticism in that researchers can indulge in a continual process of formulation with little hope or care of market acceptance. Therefore, the selection criteria and objectives for this type of study needs to be well justified and examples of well targeted products such as weaning foods and adult nutrient products have shown high levels of market acceptance in several case studies. Areas of research / issues which need to be addressed include:-

- Market studies to evaluate the market goods and quality
- Sensory evaluation of formulations, and product testing with consumers
- Packaging of products and shelf life
- Retailing outlets, price fixing and private sector funding for product launch and manufacture

Figure 3 Crop Processing techniques,New options and new markets

Three optional types of *Cassava Processors*

This power equipment is being used for village enterprise schemes

Traditional grater

Output 5-10 kg /hr
Cost $5

Improved grater /slicer

Output 30-40 kg /hr
Cost $120

Power grater

Output 1 tonne / hr
Cost $800

Niche Market products

Banana juice, beer and gin. Local produce with regional potential.

Novel products

Maltose extraction from root crop starch for confectionery products

Village level enterprise

Drying cassava flour, Luwero Ugand

Emmerging markets
Multi-Crop extruder $50-$2000

Market Linkage / sales stage

Market linkage studies brings the process full cycle, i.e. the producer is now supplying the identified market . Success or failure of an enterprise scheme depends on the ability of the individuals at a project site to sell their goods. This is related to personality and aptitude or flair, but is also a function of good planning and preparation. Any successful business needs to deliver goods to market at the right quality, the right time, to the right person and at the right price. Success in this area is the crux of market-oriented research and development. Research issues include the real options that were investigated in the market information research, i.e.:-

1. Identification of best option markets, i.e. local, regional, export etc..
2. Information on product demand
3. Knowledge of best prices, where to buy and where to sell, both primary and secondary goods
4. Knowledge of when to sell, including seasonal effects, cultural events etc.
5. What are quality premiums relative to production costs
6. Information regarding sales and transport agents
7. Identification of alternative option markets and agents

Technology transfer

Once a technology has proven to be successful, the follow-up phase for the in-country groups will be to identify uptake pathways and partners, which offer the highest level of impact or replication at the least cost. This typically involves the use of a range of partners, including Government extension, NGOs and CBOs working with the private sector partners. Common constraints affecting successful investment by small-scale farmers include lack of business skills and lack of access to credit access. These issues need to addressed if technology transfer is to be effective and sustainable.

Potential clients should undergo a process of needs assessment to target resource efficiently. Target groups should meet certain criteria, in regard to credit retrieval and market opportunities and if necessary should undergo simple business training. This training is often lacking in technology transfer operations and project failure is often a result of poor or naive business practises.

In Eastern Africa, ASARECA has a technology transfer project aimed at promoting the dissemination of proven technologies. Several groups in the FOODNET team have already benefited in terms of grants from this process and it is envisaged that FOODNET will actively solicit funds from the ASARECA TT project and from other donor sources to enhance the rate of spread of effective technologies.

3.7.2 Capacity building

Training

Training staff within national research programmes and NGOs has been traditional function of International centres, however, due to financial cuts in funding and personnel, it is envisaged that this task will transferred to the regional Networks. Nevertheless, in the past 3 years, IITA and CIP have conducted three regional postharvest training courses in the ASARECA region, to develop a core of staff with postharvest skills. The aim of these workshops has been to encourage a marketing systems approach to the research. The course in 1995 was general in nature, covering all the areas of research outlined in the research themes above, with application to Maize, Soybean, Cassava, Sweet potato, Plantain and Banana. The 1996 regional course was more focussed on Cassava and Sweet potato, with greater emphasis on market evaluation, crop processing and products. IITA and EARRNET sponsored the most recent regional course, held in 1997 in collaboration with the University of Nairobi. The focus of this course was to encourage product development and link cassava based products with markets.

It is proposed that the training to be undertaken by FOODNET will be of two types to support the lead and cross cutting activities of the Network. The first training would centre on the enterprise development teams, with a regional workshop followed up with in-country training to support a FOODNET funded processing project. The in-country training would work with the private sector group and the technical support team.

The second type of training would focus on skills training for the commodity network partners, this would be a crosscutting activity and the training theme would depend upon the needs or requests of

other networks. Topics for special skills training may include:- Marketing and methods of market analysis, Agri-business skills, Adaptive research skills and training fabricators in how to produce simple processing equipment. These are skills that may not feature in the standard commodity network training agendas, but are necessary if the networks are genuinely to make the paradigm shift towards market demand.

3.7.3 Information exchange

Information exchange within the postharvest research and development sector has been extremely limited in the past decade and in Africa, researchers find it particularly difficult to obtain current and relevant information. To address this problem, IITA initiated a Postharvest Systems Newsletter in collaboration with GTZ, in an effort to develop an informal postharvest information network. This newsletter, which started in 1996, has a circulation of 1000 copies and is printed 2 or 3 times per year. Issue 1 of the newsletter is on the IITA and GTZ homepages.

In June 1998, meetings were held by a number of the lead organisations involved in postharvest research and development including, FAO, IDRC, GTZ, CIRAD, ACIAR, NRI, IITA, CIAT, CIP and IFPRI, Kansas State University, University of Rabat, with leading NGOs including ITDG, GRET and regional representatives from Africa. This meeting sought to harmonise postharvest research activities and work towards closer collaboration between the various research partners, into a working group entitled the Global post-production forum. To start this process the group will focus on information systems, led by the FAO, INP*h*O project, **Appendix 4**.

To support these new initiatives, FOODNET will develop an information exchange system to access information and provide it to partners in the ASARECA region. As proposed by the FOODNET planning team, the FOODNET information system will consist of a combination of standard and electronic media, for information exchange. However, emphasis will be placed on the internet as this will be the information media of the future and will provide members with an interactive information service. The following aspects were raised as priority areas for information storage and distribution.
Key points for the FOODNET Information systems:-

1 Strong links will be developed with INP*h*O to provide a two way flow of data between the INPhO and FOODNET teams. FOODNET will provide a gateway facility for the INP*h*O information into ASARECA Networks and will work in close collaboration with the Ugandan National postharvest programme, which has been designated as the regional node of the system.

2 To support the flow of information from the Internet, FOODNET would set up a Website under the auspices of ASARECA, holding an archive and current information listings, including the following aspects:-

- People and partners involved in postharvest research with an email listserver
- A list of projects which are on-going in the ASARECA region, with key findings.
- Product recipes on a range of commodities
- Equipment design and operations guides
- Best practise options for research techniques
- Standard methods for analysis of products including, sensory, analytical methods
- Market information providing monthly updates on commodity prices
- Training courses across the networks
- Products on offer / demand via the internet sales sites
- Possibilities for increasing project revenue via proposal grants and donor linkages

3 To access the information and update partners on changes and progress an email listing would be developed, to inform partners who only have access to email connections rather than the Internet.

4 Non Internet users will be facilitated through other media options. One high volume possibility is to use CD-ROM for downloading website information. In discussions with other Networks, topics of interest included text information, and information on equipment design and operations, related to their specific commodity. Similarly the Newsletters, provides information to a wide client base on a biannual basis and this is already in operation.

3.8 Market information systems

A specific use of the information system and the internet will be the development of a simple market information system. At first, this information base will provide records of commodity price trends and locational deviations. The commodity records will depend upon data sources and client demands. FOODNET will work in close collaboration with the Famine Early Warning System, Agribusiness centres, Michigan State University and Ministries of Agriculture and Statistics to gather the information.

Documenting changes in price information provides researchers and clients with a vital economic record which tracks the effects of location, season, competitor crops, political stability and local or regional market demands on price stability. This data is particularly useful when making decisions on the comparative advantage for a given product at a particular location and indicates the outlook or future potential.

Similarly market information is important as enterprise activities progress towards the use of credits and loans to fund the replication of a technology beyond the pilot phase. Investment partners need to have evidence of cost and price data to assist in developing realistic business plans or loan strategies. Investment programmes can also use this data to evaluate feasibility studies and traders can review regional data to assess cross border opportunities.

Market information system, may also open prospects for enhancing regional and international trade through electronic negotiations. Traders, particularly niche market traders, are developing new systems for international trade, using the internet as a notice board for trade contracts. There are currently listings of commodities for sales and products in demand for a number of African commodities. FOODNET can provide a focal point to collate information on sales prospects for given commodities or serve as an access point to service partners who are interested in gaining this information.

Developing a market information system is generally not the type of exercise that an individual would embark upon. For the FOODNET project, this is an opportunity to provide a service role to private sector partners, investment programmes and the research community. The archival and district level data sets are typically available within most countries from the Ministry of Agriculture, Trade or Statistics. Making this information available to a wider audience in Africa, has been difficult to achieve in the past, but with the advent of the Internet, an on-line system can provide such a service.

3.9 FOODNET Structure and Governance

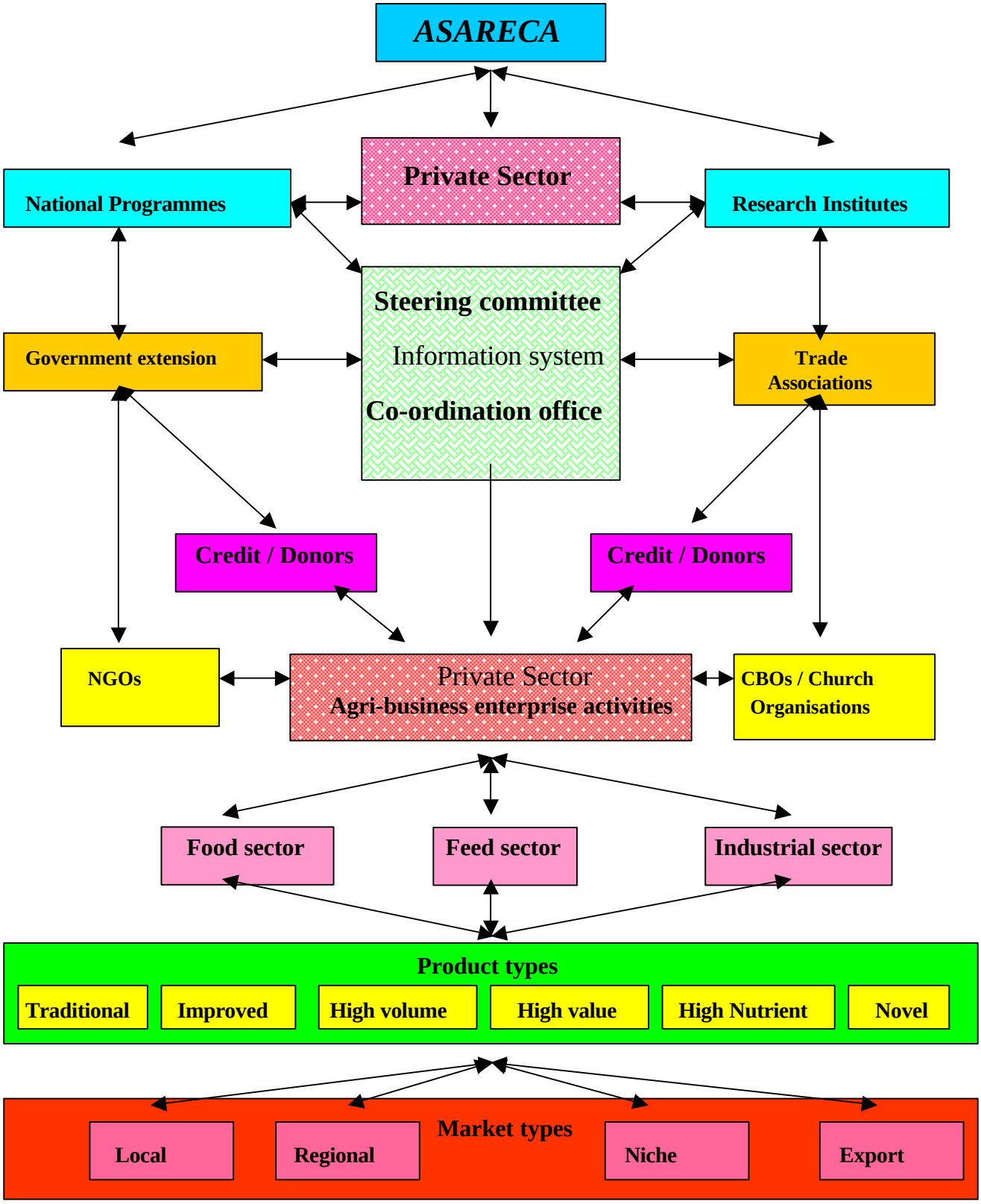
Due to the nature of the FOODNET activities, partners will work in close collaboration with a number of agents involved in the research and marketing chain. The project will strive to gain a high degree of private sector involvement at both the planning and implementation stages. The linkage diagram overleaf, provides a schematic guide to the process of information and technology flow, **Figure 4**.

The steering committee for planning, monitoring and evaluation

The steering committee will be the decision making body within the FOODNET project. The role of the steering committee will be to set the research agenda, review priorities, and select proposals for the FOODNET competitive grant scheme and monitor progress. The FOODNET project steering committee, will meet annually and efforts will be made to ensure close collaboration with linked NETWORKs and their steering committees.

The composition of the steering committee (SC), will include membership from a broad geographical range and include members from national programmes, Universities, NGOs, International centres, donors and the private sector. Co-ordinators from collaborating networks would also be invited to strengthen network linkages. Although the inclusion of private sector partners was considered an essential component of the structure, it was recognised that many private sector partners would be unable to attend long meetings. If this proves to be the case, a practical compromise was proposed whereby, the core members of the SC would meet over a week long period. Private sector partners, from the host country could then opt to be invited to attend on selected days to discuss priority issues, such as the topics and commodities being researched in the market surveys and in the selection of enterprise projects. On the final day the SC would report back to invited private sector partners to ascertain their comments and make changes based on their suggestions. Similarly the presence of host country donors would be important within the SC meetings, so that the members could present their projects to bilateral agents to seek co-sponsoring of activities.

Figure 4
A schematic overview of partner linkages within the FOODNET system



3.9 Financial arrangements for the Research &Development Competitive Grants Scheme

The FOODNET project will co-sponsor a portfolio of market research and enterprise projects through a competitive grant fund. Proposals will be solicited from all stakeholders and these proposals will be reviewed for funding by the FOODNET review / steering committee. The fund size will range from $3000 – to $14,000 per year depending on the activity. These funds will be use to supplement on-going activities and to initiate new areas of research and development by a national programme, University, NGO or private sector group.

For each successful project, the funding will be dispersed directly to the lead person, designated "project manager", within the proposal and s/he will assume personal responsibility for both technical and financial reporting. The project leader can either open a specific bank account for the activity or use their institutional account. In both cases financial reporting should be done through the institutional or group accounting system. Financial reporting will be done on a 6 monthly basis and will follow a standard procedure, whereby 50% of the funds will be made as an initial payment with the subsequent 30% funding being paid, when the first tranche of funds has been accounted for and an final payment of 20% will be made when the project is completed and reported both financially and technically verified. To avoid problems with accountancy, project members will be supplied with information regarding IITA policies and procedures for accounting, this matter will be discussed at the steering committee meeting.

Additional resource seeking

At the Planning meeting, members of the FOODNET planning team revealed that their research was being funded from a range of donors. However, there was a feeling within the group, that more could be achieved, once FOODNET was established to lobby for additional donor funding for postharvest research and implementation. It was therefore proposed that the co-ordination office should provide a lead role in championing the cause of the group and provide members with standard formats for proposal development, support in project formulation and information on leads to gain additional funding.

Monitoring and evaluation

As part of the standard reporting protocols, FOODNET will document 6 monthly reports on project progress and print an annual report of the NETWORKS activities, to coincide with the Steering committee meeting. Monitoring and evaluation of the projects will be done in collaboration with the partners, i.e. using progress reports, and checklists to assess achievements against milestones. When a project has been completed an independent organisation, i.e. an NGO or University will be consulted to undertake monitoring and impact assessment with support from ASARECA based social scientists.

Regionality and economic targeting of FOODNET projects

The first draft of the FOODNET proposal limited the area of intervention to the lake zone countries; however, at the planning meeting it was decided that all ASARECA countries should be included. This decision was made with the caveat that projects would be assessed with a greater bias to their competitive merit, rather than simply meeting regional equity. In terms of postharvest research and development, the countries in the ASARECA region offer a range of opportunities for intervention. The region holds countries with contrasting levels and mixes of crop production, economic development, industrial capacity, access to markets and population densities. These factors will influence the types of products and processes being introduced and developed with the respective communities. For example, the development of starch processing may be of interest in areas where target groups have access to larger-scale industries and can link processing with a manufacturer. Power driven processing equipment may be more attractive to rural groups with good access to roads, whereas simple manually driven household equipment combined with long shelf life products may be most appropriate to the more remote groups in areas with poor roads and few urban markets. Efforts will be made to test and disseminate a range of technologies, which will assist groups of people at different levels of social advantage. However, farmers / processors or community groups will be targeted, including those who are more economically self-reliant and are already engaged in marketing produce or have some degree of speculative capital to exploit new market opportunities.

3.10 Background information to the Steering Committee meeting.

Strategy for developing and implementing the workplan in year 1

As FOODNET is a new network, a programme of marketing and agro-enterprise activities needed to be put in place, which would achieve the required research goals and also establish strong links with both existing networks and new partners. The first quarter of year 1, was involved with planning and strategy meetings to discuss and initiate the programme as outlined in the proposal, **Figure 5**. The first interim FOODNET steering committee meeting was held from November 8-10, 1999. The committee contained members from across the region and spanned a range of institutions including National Programmes, Universities, food research Institutions, NGOs, agri-business projects and International centres**, see Annex 1**.

This enlarged group reviewed and prioritised areas for research in the first year in terms of market analysis and enterprise development. The group discussed and endorsed the FOODNET strategy, highlighting areas of research within the networks, which could be eligible for FOODNET support and those areas of research that will need to be established. The interim committee also formulated the representation of the formal steering committee.

The agenda for the meeting of the first interim steering committee is shown in **Annex 2.** At the planning meeting in June 1998, much of the topics listed in this agenda were discussed, by the design team**, Annex 3**, and therefore the meeting started with endorsing previous decisions such as the crop priority listing **Annex 4**. The output from the meeting was a plan of activities and guidelines.

Following the meeting the co-ordination office will make a call for proposals from the regional stakeholders. The proposals will be received and forwarded to the co-ordination office, where they will be prepared for review by the elected steering committee. The proposal will then be sent out to the SC members such that when the SC meets the individual member will have had some time to review and prioritise the project options.

Programme for developing a 5 year plan

Following the inaugural meeting the steering committee will meet to review and approve the programme of activities. Following the approval of projects, discussions will take place to formulate the framework for the five year plan against targets and indicators. It is envisaged that the final plan will be completed via email following the SC meeting. Hence the meeting itself will debate the major elements and reach consensus on policy issues. The output from the SC meeting will be a programme of activities for the first round of projects and training events. After the SC meeting the implementation of the project will basically follow the activities outlined in the plan of operations from the approved proposal, **Figure 5**. This programme of activities will be expanded and details elaborated upon, so as to develop a clearly defined strategy and workplan based on the two major research areas of **(i) Market information and (ii) Enterprise development**. Once consolidated and given a timeframe, the activities will make up the structure of the five year plan. Hence, within the first year, a results framework will be developed with a programme of regional activities with targets, indicators and a method for monitoring progress. In addition to being a stand alone operation FOODNET will also show how the activities support the existing networks and thus strengthen the shift towards market led research.

Linkages with the networks

The existing networks including EARRNET, PRAPACE, BARNESA and ECABREN were planned as the first networks to collaborate with FOODNET. Discussions at the planning meeting suggested that FOODNET should start by focussing its research strategy on root crops as the region has capacity in this area, and then work in a stepwise fashion through the commodities on a demand / best opportunity basis. As such the programme for market research would start with cassava and sweet potato and initiate market surveys in the major areas of root crop production including Uganda, Tanzania, Kenya, Rwanda and Madagascar. Activities for enterprise development would similarly start with root crop activities and use the experience gained from these sub-projects to expand into other crop areas. Expansion from this strategy need to be discussed at the committee meetings and it is envisaged that the other network co-ordinators will provide options and priority areas for first year support.

Linkage with other agencies

It is important that FOODNET not only develop strong regional links but also strengthen linkages with partners outside of the region. FOODNET has already initiated this process and is a founder member of the newly established "Global postharvest forum" entitled PhAction, see **Annex 5**. This group will enable FOODNET partners to access information and links with other postharvest partners across the globe. Given the current lack of experience in areas such as sub-sector analysis, these linkages will be important in accessing expertise to work alongside FOODNET partners in developing analytical skills.

Developing the FOODNET information system via a website

One of the key platforms for the information system will be a cross commodity website. This site will be developed in collaboration with the other networks and as the site may be one of the first ASARECA websites, efforts will be made to actively seek and promote information from other networks. It is noted that websites are a new technology and that many of the partners in the networks do not have ready access to internet at this time. However, it is this type of technology, which not only provides access to otherwise unavailable information but also provides a method to reduce transactions costs between partners. The website can therefore be used to supply information but also to act as a notice board and a calendar of events for activities such as training events and funding opportunities. Similarly the website will also provide a window to access of useful hotlinked sites such as those listed below. Use of the internet is fast becoming a standard and invaluable tool for researchers in most industrialised countries and therefore encouraging scientists in Eastern Africa to join in this global resource is considered an important capacity building exercise.

Output from year 1

Since the Network familiarisation meeting FOODNET has been actively engaged in developing the framework of the network, initiating some areas of research and establishing links with partners in and beyond the region. ***The progress of the network to date is summarised in Annex 6***. As funding from USAID comes on stream the network development will follow the action plan shown in **Figure 5.**

As shown in **Figure 5**, within the first 6 months the network will be fully formulated with a steering committee and a detailed plan of activities to implement the programme. The market led approach will be implicit to the strategy and the funding will be programmed to support market research, enterprise development and training to strengthen these areas of research. At the end of year 1 a results framework will be established with details of ongoing and planned activities, which will be formulated into a coherent 5 year plan.

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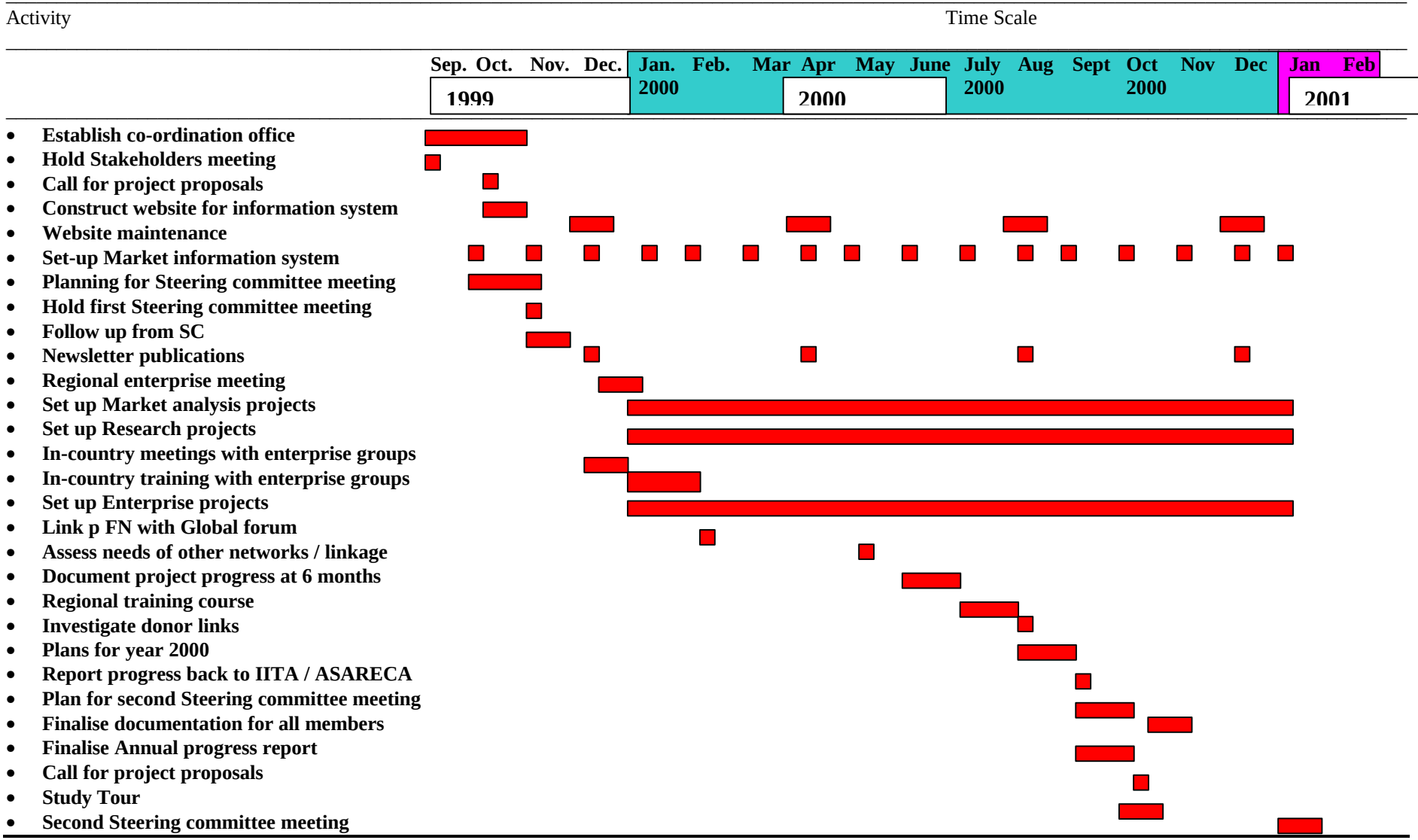
Figure 5 Plan of operation to be presented to the Stakeholders and Steering committees for discussion, review and approval



4.0 Workshop Papers

4.1 Researching the Marketing Chain

Clive Drew
Chief of Party
Agri-business Development Centre
Uganda.

Introduction

For many years, agricultural research effectively stopped at harvest and almost no research was applied beyond the farm gate. It was assumed that the market would simply absorb good technologies and demand for increased production would exist. Ten years ago, in Africa, this was to some extent true, as statutory marketing boards controlled the market regardless of the distortions and related social costs. However, with market liberalization at both the national and international levels, this assumption no longer holds. The market exists, its rapidly becoming deregulated and there are now real social and economic pressures caused by this change. This means that if research is to support people's livelihoods, it must now take on a more market-led to provide relevant and useful information.

Increasing competition at the market-place has led some development researchers and much of the NGO sector to seek value-added opportunities for raw agricultural products. The benefits of extending storage life, improving quality and presenting a product in a more consumer-ready form are fairly obvious. However, net benefits can also be elusive, because these enhancements come at added cost that must be less than the incremental value that someone is prepared to pay. It is therefore critical to not only understand the market, but also to devote a tremendous amount of effort to market development. Public-private sector partnerships are important components of this process and we cannot deal with these matters in isolation, hence the need for an integrated commodity systems approach.

The integrated commodity systems approach

The Agribusiness Development Centre (ADC) in Uganda was set up within an integrated commodity systems approach. There is no specific definition for this strategy, but in essence, promotion is provided to "selected commodities", i.e., best bet products / commodities. The approach is market-led, meaning there has to be a "home" for the product being offered in whatever form that may be, where the volume of commodity produced can be sold over a defined seasonal period, and the price received must be sufficient to be profitable after deducting all real costs.

ADC works directly with buyers or wholesalers, i.e., the people with the cheque book and directly with producers, traders and exporters. The office is set up to offer a one-stop shop. ADC addresses the entire commodity chain, from consumer all the way back to the producer, and for selected commodities and clients interventions are made where there are weak links in the chain. The following information provides a simplified example of the types of issues that need to be tackled when dealing with developing market opportunities.

Flow Chart for Agro-industries

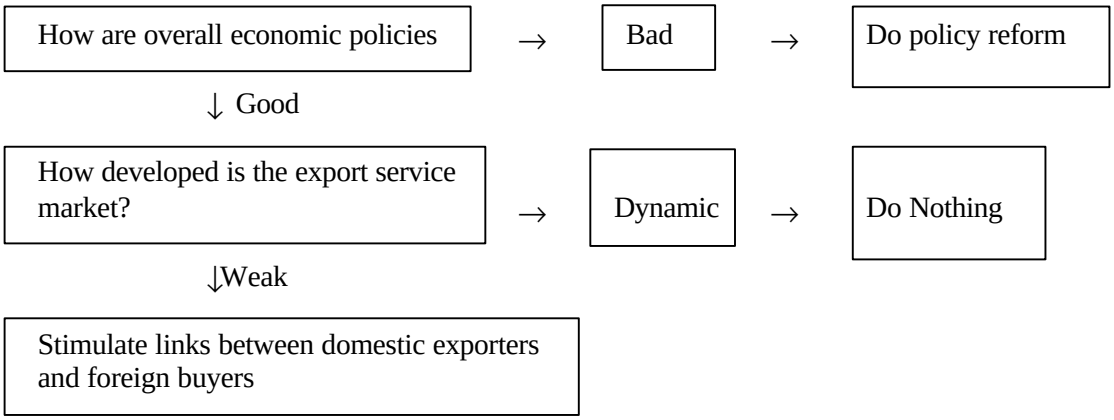
The chart shown in **Figure 6** shows a typical process flow for any given commodity. From an agribusiness perspective the chart is inverted, so that the market is at the top, as the market-led process starts at the marketplace and then works back to the producers. There are many steps, processes and tasks beyond the farm gate, and even beyond agro-industry. So, whether it is a raw agricultural product or a transformed agro-industrial product, there are many activities which need to be costed and completed before the product reaches the consumer, especially if it is exported. With so much activity beyond the harvest date, it is apparent that research and development does not stop at the farm gate or the factory loading dock.

A Decision Tree for Supporting Export Services Projects

One of the tools used by ADC, when assisting a client in market development is the use of decision making trees. The decision tree is a less formal type of marketing check-list which guides a client

through a series of options in a question and answer style. The types of issues within the decision tree set out the pre-conditions in developing a product for sales, whether this is for local or export sales. The types of issues, which occur at the top of the tree include the fundamentals of the economy and the market. As the client is guided through the process, the questions become more directly related to the details of their business. The client details provide the framework of information required and tasks to be done in order to (a) provide a preliminary feasibility of the project and (b) indicate the areas which need to be improved in working towards a more competitive business.

A Decision Tree for Supporting Export Service Projects



Typical flow chart for fresh produce for export

The information in **Figure 7**, provides a simplistic flow diagram for exporting a fresh product. Processing and other value added activities would add many more dimensions to the flow. The three main centres depicted are the (i) farm, (ii) pack house and (iii) airport. The main point to gain from this diagram is that, it is not just a simple matter of collecting a commodity from the farm and putting it on a plane. There are also many more steps after the good have been loaded onto the plane before it reaches the consumer at the point of destination.

Costs of Exporting Hot Pepper from Uganda

The price data in **Figure 8**, shows a rather harsh, but often real life reality faced by small holder's in a remote location, dealing with a so called "high value" commodity. Basically this provides an idea of the types of costs involved when shifting from local to commercial sales. This price sheet also shows the gains that can be made from simple economies of size, and the relative farm gate to market spreads in price. There would obviously be further costs if this price data was extended to retail. The point is that some of the costs are fixed, such as truck hire and airport documentation, regardless of volume shipped and the producer therefore has to deal with his non-fixed costs, which often comes down to production costs and labour costs. Note how small the farm gate cost is to total costs.

Unit Costs of Shipping Hot Peppers by Air

The information in **Figure 9**, is based on budget data and shows the economies of size as volumes shipped increases for small holders. It is important to recognise that small volumes have high unit costs. Even these volumes are very small, if we compare them to a full air charters of 30 to 45 tons of product and the use of 55 feet refrigerated reefer vans.

Relative Share of CnF Cost for Hot Peppers

The data in **Figure 10**, shows how the pie is divided up to CnF (Cost and Freight) point. Note that the farm gate share of a 300 box shipment is only 6.2% of total costs and that air freight accounts for 68.1% of total CnF costs. These are just costs, they don't include interest charges, insurance and taxes or a margin of profit for the shipper.

Conclusions

1. It is essential to carry out a full process flow for commodities and then do careful budgeting, after this the development team can start to determine if the venture is still profitable. On many occasions, what seems like good ideas does not stand the profitability test.

2. Whereas many technical research priorities are based on improving production, up to the point of the farm gate, research priorities and the resultant pay-offs of an agribusiness are generally beyond the farm gate. For example, researching air freight options that result in a 10% reduction in freight rates (6.8% of CnF value) is equivalent to the full value of the product delivered to the pack house (6.2%). We call this "sensitivity analysis" also termed "what if?" analysis. This is also something that is very easy to accomplish in this modern day and age with spreadsheet software – just have the model specified accurately, and use real-world data.

Lessons learned

Here are a few lessons learned from our experience in employing the integrated commodity systems approach:

1. There is no perfect model, each day brings new surprises and at ADC we are getting both results and an overwhelming number of requests for our services, so some of the chemistry must be right.

2. Market support occupies most of our time, maybe more than 60% of our technical support is on the marketing end.

3. Client support is a continuum, rarely a one-time intervention.

4. **Professionalism** is an absolute essential. We are dealing with agribusiness, with people's livelihoods, with profits and losses.

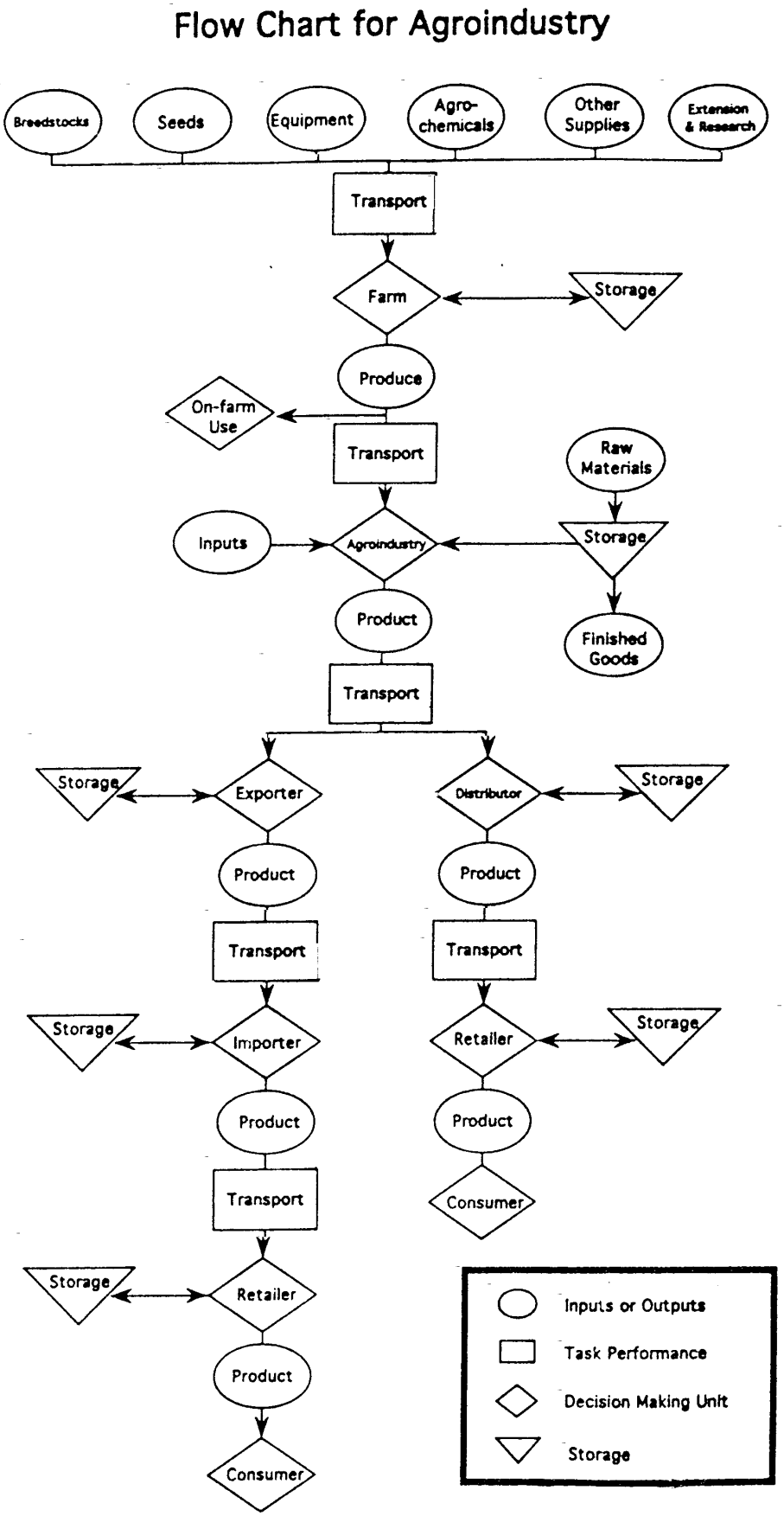
5. Clients need to be selected very carefully. Stay focussed, have an objective screening mechanism, monitor performance closely and be prepared to terminate any operation, or get terminated.

6. Recognise where a client fits in the chain, and make the necessary linkages, but do not attempt making all clients fully integrated. Some, for example, must stay as producers and title to the commodity may have to change hands at the farm gate, and at other points as it moves through the marketing chain.

7. Marketing margins are in reality, not just "middlemen rip-offs". High transaction costs are often the result of inefficiencies brought about at the farm level by offering small volumes on an inconsistent basis of low quality produce, with poor infrastructure. This unfortunately is the case for most farmers, they are too small, too inefficient and have irregular production times and generally attempt to sell low quality products. The international market does respond well to this type of approach and in many countries, globalisation means that the reality of supplying modern African cities from overseas will be cheaper than purchasing locally. This is a real prospect which has serious implications for researchers.

8. We must be pragmatic, most of these exercises do not require major research studies. To serve the clients, we need to be responsive to the private sector producers, traders and exporters, and to the foreign buyers. Actually, we need to give immediate answers and we must be able to sort out problems as they arise.

Figure 6


Flow Chart for Agroindustry
Breedstocks
Seeds
Equipment
Agro-chemicals
Other Supplies
Extension & Research
Transport
Farm
Storage
Produce
On-farm Use
Transport
Raw Materials
Inputs
Agroindustry
Storage
Product
Finished Goods
Transport
Storage
Exporter
Distributor
Storage
Product
Product
Transport
Transport
Storage
Importer
Retailer
Storage
Product
Product
Transport
Consumer
Storage
Retailer
Product
Consumer
Inputs or Outputs
Task Performance
Decision Making Unit
Storage

TYPICAL FLOW FOR FRESH PRODUCE EXPORT

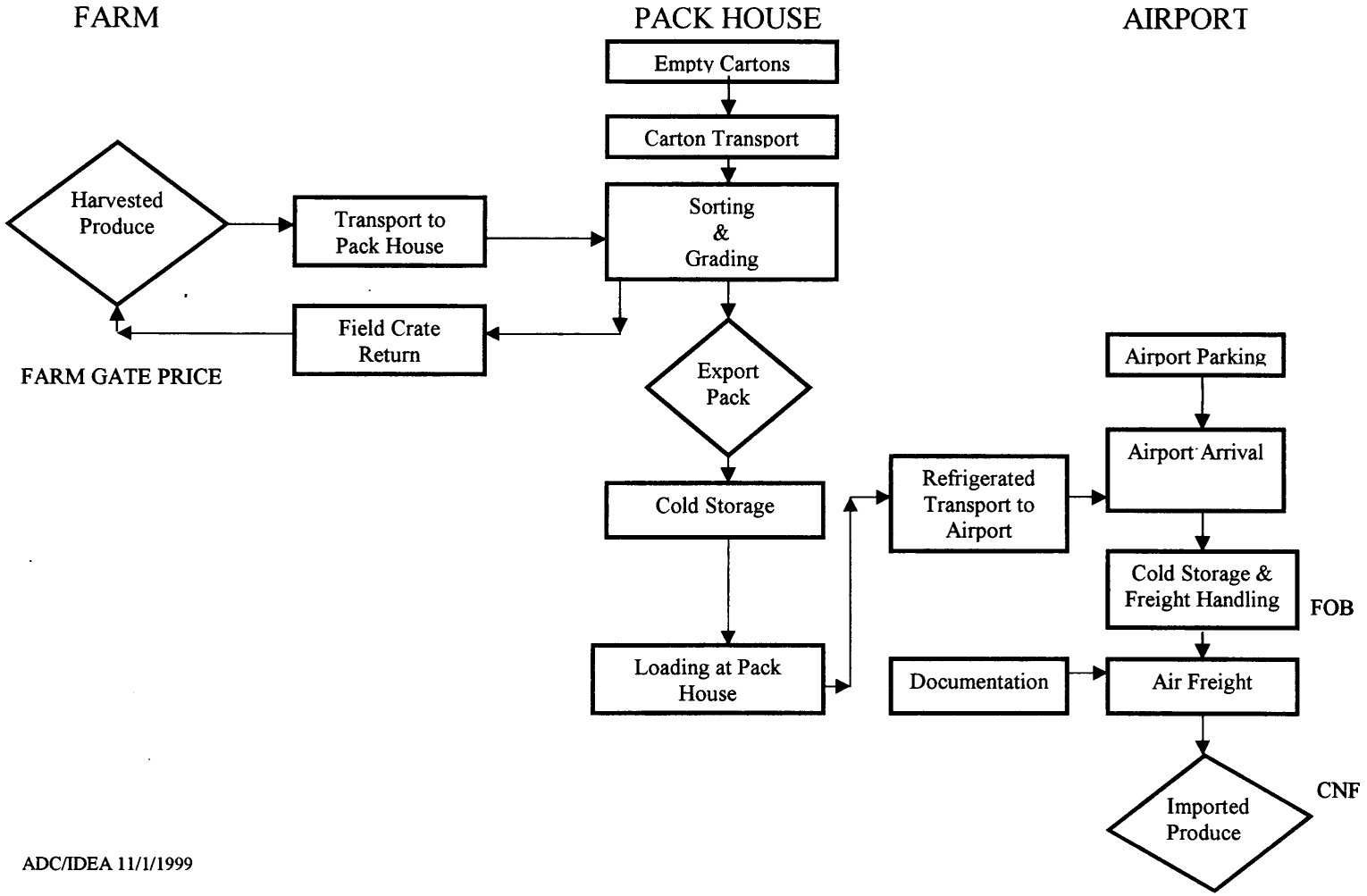


Figure 7

Figure 8
COSTS OF EXPORTING HOT PEPPER FROM UGANDA

ITEM	UNIT	UNIT COST	VOLUME SHIPPED 200 boxes 800 kg net 900 kg gross	250 boxes 1000 kg net 1125 kg gross	300 boxes 1200 kg net 1350 kg gross	300 box % OF CNF VALUE
Farm gate price - ungraded	kg	230	184000	230000	276000	6.2
Delivery to pack house	kg	10	8000	10000	12000	0.3
Pack house price - graded (80% export packout)	kg	300	240000	300000	360000	8.1
Sorting and grading - graded	kg	50	40000	50000	60000	1.3
Carton, 4 kg box	box	1100	220000	275000	330000	7.4
Empty carton transport	box	100	20000	25000	30000	0.7
Loading at pack house	box	30	6000	7500	9000	0.2
Transport to EBB, 2 tonner	truck	400000	400000	400000	400000	9.0
Airport parking	truck	3600	3600	3600	3600	0.1
Airport handling charges	kg gross	75	60000	75000	90000	2.0
Clearing & documentation, AWB, bond fee, agency fee, charges collect fee, phyto	shipment	140000	140000	140000	140000	3.1
TOTAL COST, FOB	USh		1129600	1276100	1422600	31.9
Air freight	kg gross	2250	2025000	2531250	3037500	68.1
TOTAL COST, CNF	USh		3154600	3807350	4460100	100.0
UNIT COST, CNF	Ush/kg		3943	3807	3717	
UNIT COST, CNF	US$/kg		2.63	2.54	2.48	
FARM GATE SHARE OF:						
FOB COST	%		16.3	18.0	19.4	
CNF COST	%		5.8	6.0	6.2	

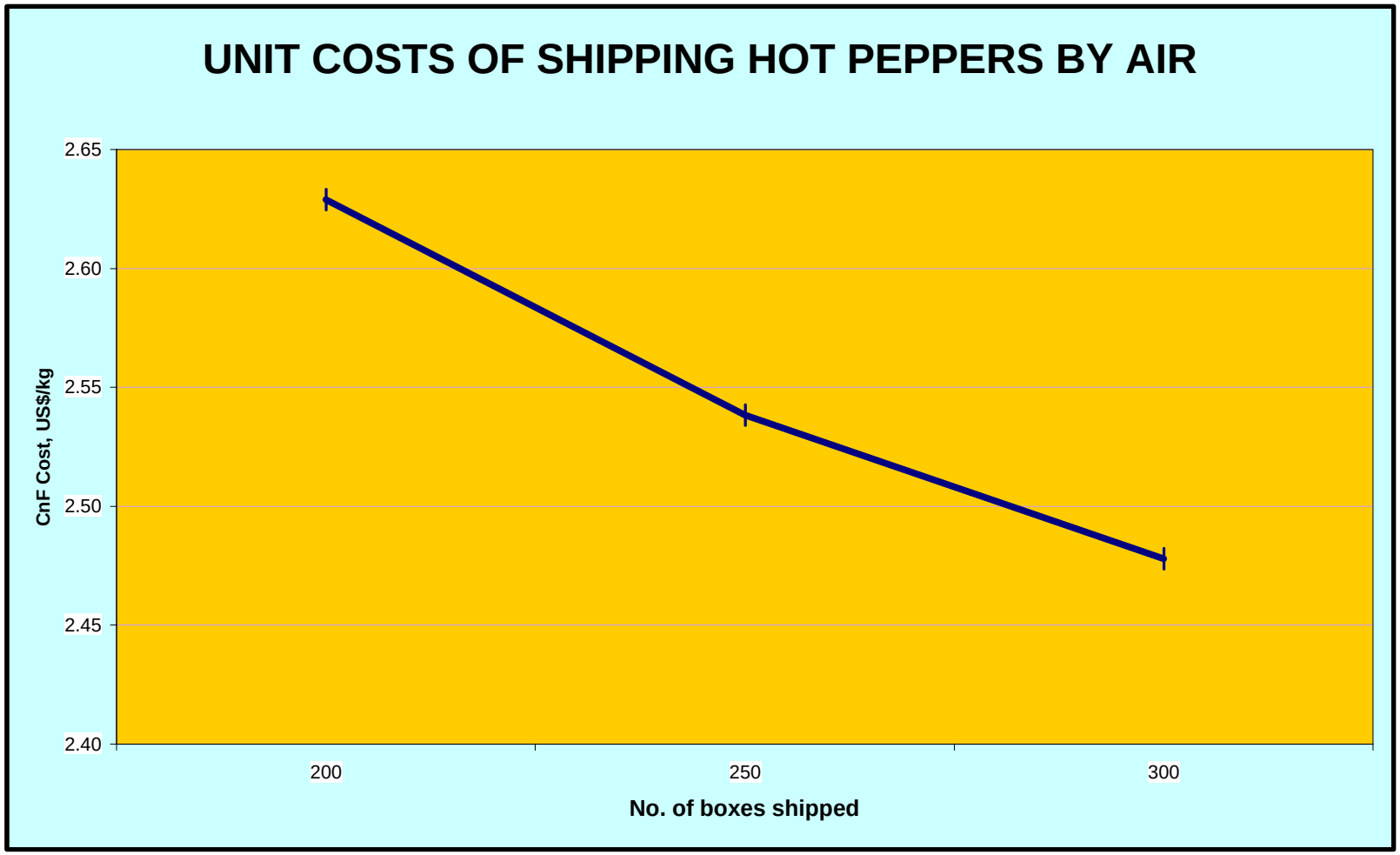

UNIT COSTS OF SHIPPING HOT PEPPERS BY AIR
2.65
2.60
2.55
2.50
2.45
2.40
CnF Cost, US$/kg
200
250
300
No. of boxes shipped

Figure 9

RELATIVE SHARE OF CNF COST FOR HOT PEPPERS

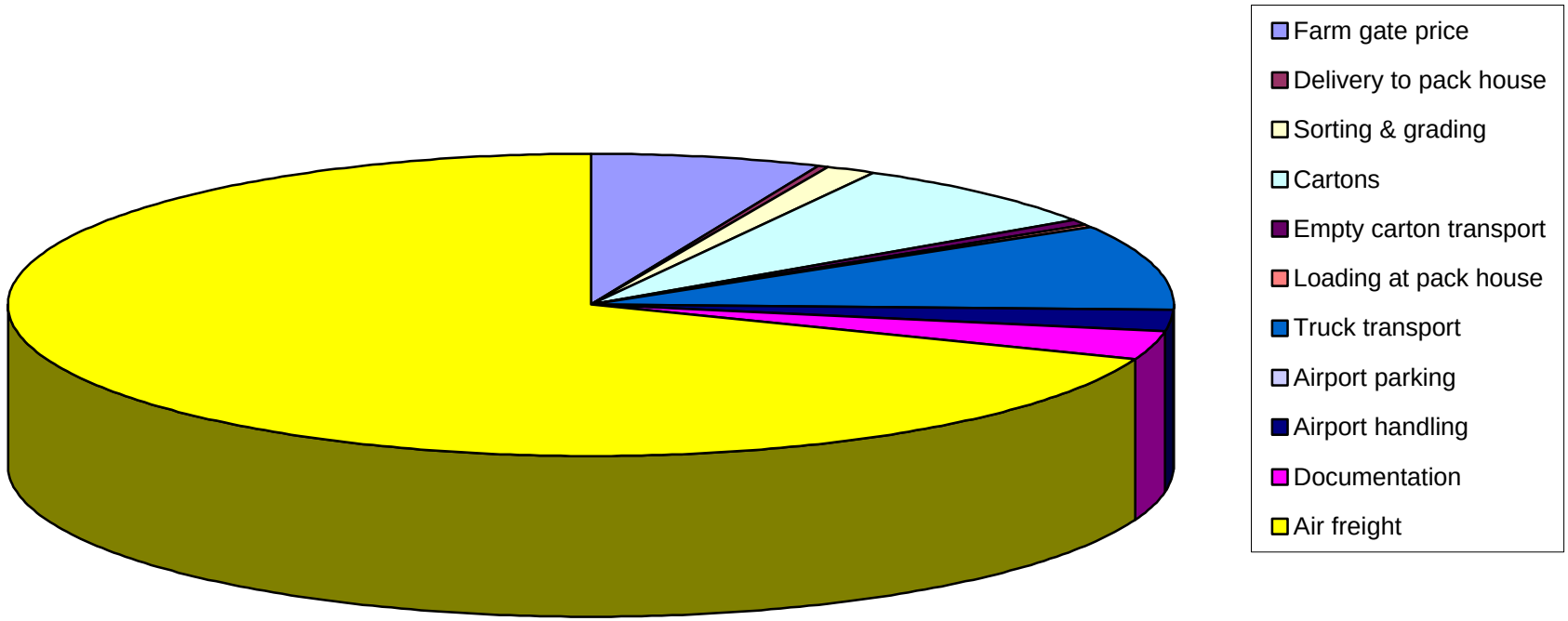


Figure 10

Figure 11

COSTS OF EXPORTING HOT PEPPER FROM UGANDA

ITEM	UNIT	UNIT COST	VOLUME SHIPPED 200 boxes 800 kg net 900 kg gross	250 boxes 1000 kg net 1125 kg gross	300 boxes 1200 kg net 1350 kg gross	300 box % OF CNF VALUE
Farm gate price - ungraded	kg	230	184000	230000	276000	6.2
Delivery to pack house	kg	10	8000	10000	12000	0.3
Pack house price - graded (80% export packout)	kg	300	240000	300000	360000	8.1
Sorting and grading - graded	kg	50	40000	50000	60000	1.3
Carton, 4 kg box	box	1100	220000	275000	330000	7.4
Empty carton transport	box	100	20000	25000	30000	0.7
Loading at pack house	box	30	6000	7500	9000	0.2
Transport to EBB, 2 tonner	truck	400000	400000	400000	400000	9.0
Airport parking	truck	3600	3600	3600	3600	0.1
Airport handling charges	kg gross	75	60000	75000	90000	2.0
Clearing & documentation, AWB, bond fee, agency fee, charges collect fee, phyto	shipment	140000	140000	140000	140000	3.1
TOTAL COST, FOB	USh		1129600	1276100	1422600	31.9
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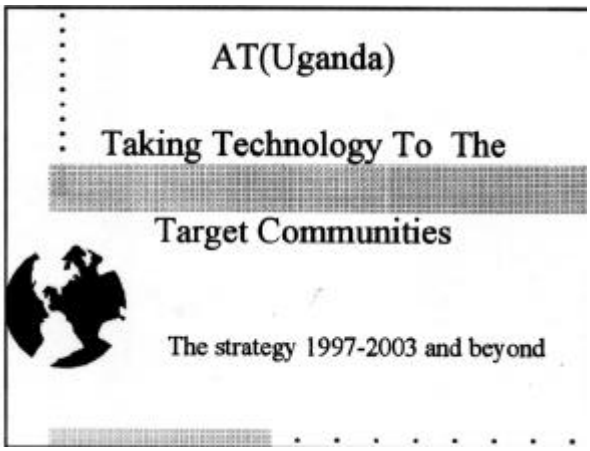
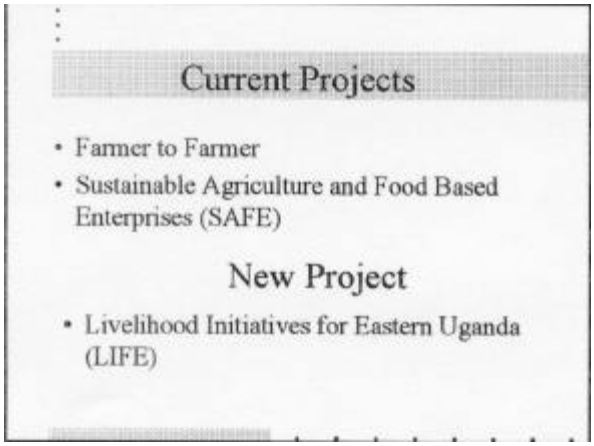
UNIT COST, CNF	US$/kg		2.63	2.54	2.48	
FARM GATE SHARE OF:						
FOB COST	%		16.3	18.0	19.4	
CNF COST	%		5.8	6.0	6.2	

4.2 Taking technologies to the target communities

Rita Ojok-Laker
Director
Appropriate Technology Uganda

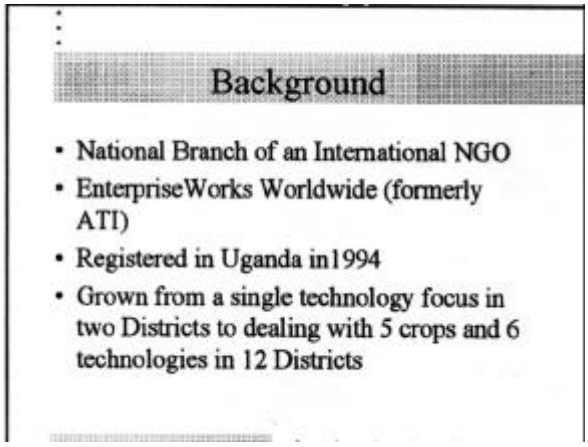


Appropriate Technology Uganda is a leading NGO which is working to provide technologies to the target group. In this case, resource poor farmers and processors. The aim of the organisation is to provide farmers and processors with the information and technologies to allow them to access new market opportunities and increase the profitability of their household businesses.



One of the fundamental roles of the NGO is to develop the INPUT market for farmers such that they can access new markets. AT has been instrumental in developing a number of stockists throughout the country to supply farmers and processors with basic farm inputs, such as seeds, fertiliser and basic farm machinery.

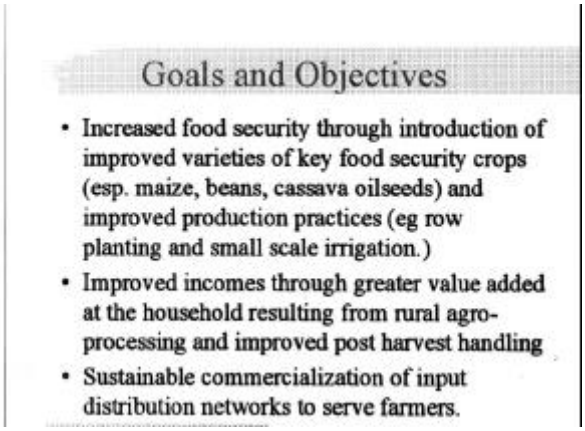
The projects have had a food based approach, seeking ways of adding value to primary commodities. This approach is now being applied to the livelihood approach which is being promoted by DFID.



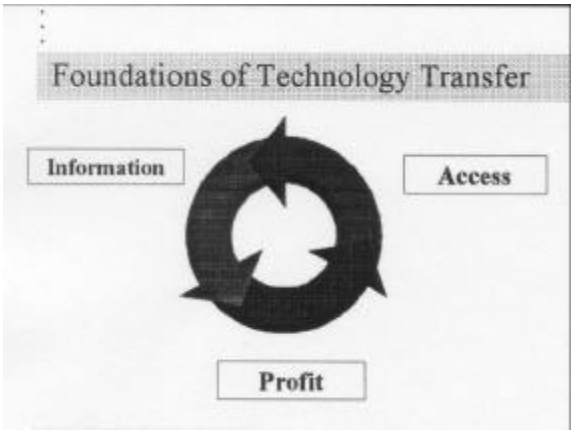
AT Uganda originally focussed on developing the market for locally pressed oil from sunflower. The NGO was therefore involved in the design and dissemination of a manual oil press, which could press sunflower oil.

The NGO has expanded its role from a focussed single output project to include 5 crops viz: sunflower, cassava, sweet potato, maize and beans and 6 technologies viz:- (i) sunflower oil press, (ii) shea nut press, (iii) peanut butter grinder (iv) sweet potato / cassava chippers and graters, (v) water pumps and (vi) animal feeds.

The NGO has also undergone a face-lift recently to reflect its new role as a promoter of the agri-business approach. The organisation has changed names from Appropriate Technology Uganda and is now called Enterprise Works Worldwide.



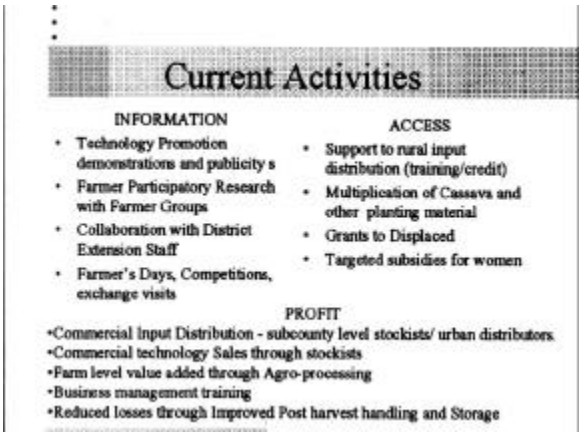
As the NGO has expanded so the goals have broadened to accommodate the market-driven approach. The basic elements however remain in that the projects aim to increase rural income through value adding activities. New technologies are tested and adapted with partners in the field and when a technology shows promise it is disseminated on a commercial basis.



The technologies selected by EWW, are transferred within a strongly profit driven framework. The NGO provides information, training and the know-how to access new ideas and market opportunities.

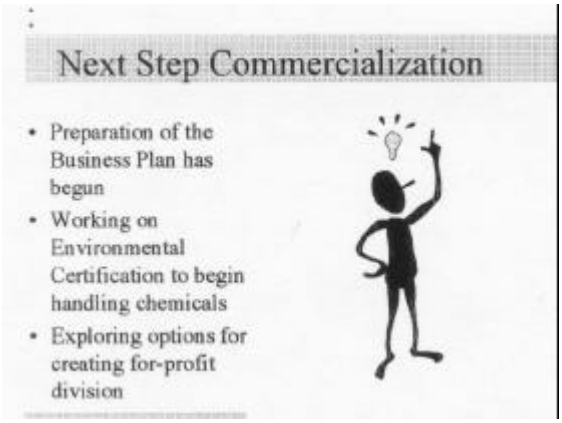
The technologies are not free and the NGO does not work on a charity basis. Farmers are encouraged to pay for their new technologies and to buy inputs from the stockists stores.

A profit driven incentive is the one that many NGOs do not use as the take up is obviously slower than when technologies or inputs are provided free. However, as profitability is in many ways synonymous with sustainability, the EWW group believe that it is better to develop more slowly within a real market framework than to gain short term popularity using the charity approach.



Although profit is the primary objective the technology transfer process, it is clear that there is a development stage. The NGO therefore spends considerable effort and funding in promoting its ideas, holding farmer workshops and working with farmer groups to adapt technologies to local conditions.

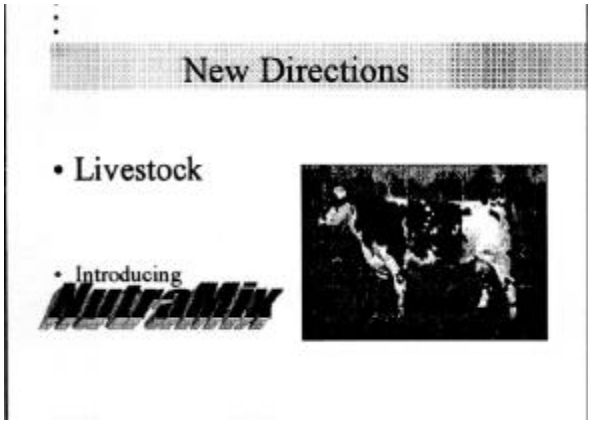
The NGO also provides a training and credit scheme such that farmers who wish to use a technology, which they have seem demonstrated. Targeting funds to special interest groups such as women's groups enables the NGO to assist the most vulnerable groups in society, without excluding other members.



The key to successful technology transfer or exchange is managing the shift from a test pilot phase to a expanded distribution or sales of a technology.

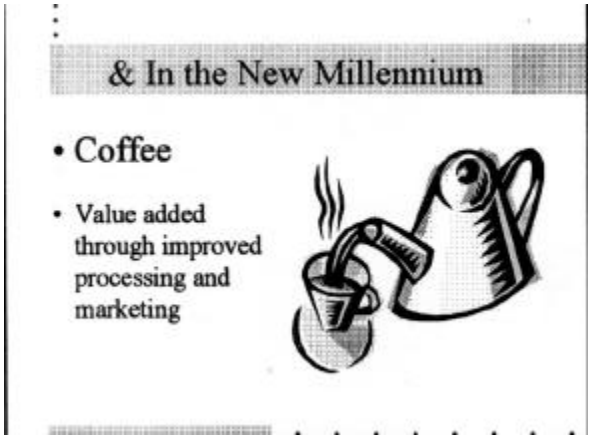
EWW approach this aspect by assisting its clients in developing business plans and providing clients with specialised training where needed.

In the future EWW is exploring the possibility of developing a FOR-profit division which will focus on best bet options and maximising incomes.



One of the latest technologies that EWW has taken into its portfolio of technologies is the Nutrimix animal feed for dairy cattle.

This feed is targeting commercial dairy producers and assisting these farmers to access the high milk yields that improved stock can provide, if they are given the appropriate feed regime. As with hybrid crops, farmers do not realise the yield potential of the best producing genotypes unless the environment and input supply is sufficient to attain the yield potential. Animal husbandry is the same and EWW is seeking to provide the necessary feed regime through its stockists.



In future, as the NGO develops more skills in higher value marketing and agri-business development, the NGO will be seeking to support alternative market options.

For example, specialist coffee and tea products are not well exploited in Uganda and with the liberalisation of the beverage markets new opportunities are available. At present, Uganda is not producing well branded Heirloom coffee or teas, that attract highest prices from European connoisseurs and this is a market which has real prospects of raising small –farmer incomes.

EWW will be exploring these new marketing opportunities and is seeking partnerships with other likeminded organisations to facilitate this process.

4.3 Replacing Pills with Sweet potatoes to Combat Vitamin A Deficiency

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One of the roles of postharvest research is to provide people with "nutritionally improved food products" and a good example of this is the development of the Vitamin A rich sweet potatoes developed at the International Potato Centre. Vitamin A deficiency is a serious nutritional problem in many developing countries. Millions of people suffer from this affliction, which leads to night blindness, xerophtalmia, keratomalacia and pro-longed vitamin A deficiency can impair the immune system, (Bates, 1995). Since the early 1990s, the main strategy for combating Vitamin A deficiency has involved a massive campaign to distribute dose capsules. However, a similar effect could be achieved by incorporating b-carotene and Vitamin A in traditional foods. The International Potato Center (CIP) is conducting research to develop vitamin rich, orange, sweet potato varieties which will provide a safe, cheap, and simple delivery system for controlling Vitamin A deficiency. The orange varieties are also being promoted by product development studies, which are incorporating the vitamin rich roots into traditional food products. Success in this combined effort from the breeders and food scientists will make an invaluable contribution towards improved human health, particularly among the poorer and more vulnerable groups, such as the women and children.

At present, the most widely consumed sweet potato varieties in East Africa, are white or pale-yellow flesh types, which contain relatively low levels of b-carotene. Therefore, the CIP, breeding programme is selecting for orange sweet potatoes with high b-carotene content. Farmers in the region are testing these vitamin rich varieties for their agronomic performance, but it was unclear how acceptable the b-carotene-rich sweetpotato roots would be as a source of vitamin rich food products. Therefore, a study was undertaken to identify changes in total carotenoid contents of some traditional foods such as buns, chapatis, and mandazis, when roots of the orange-fleshed, sweetpotato cultivar, CIP-420027, were used as the major ingredient. Total carotenoid content was determined using standard techniques and concentrations were determined by comparison with a standard curve developed using pure b-carotene from Sigma, St. Louis.

Results and discussion

The addition of orange-fleshed sweetpotato roots to buns, chapatis, and mandazis dramatically increased the total carotenoids content and consequently b-carotene in the products (Table 2). However, there were differences in carotene content caused by the method of processing. Boiling the roots reduced total carotenoid content by 20%, whereas drying the roots into chips and then using the flour, reduced carotenoid content by 30%. Fortunately, carotenoids are heat-stable and insensitive to changes in pH (Sian and Ishak 1991). The colour changes that occurred during the cooking processes of blanching, cooking, or heat sterilization reduced colour intensity, but this was attributed to the isomerization of trans-carotenoids to the less colored cis-form (Sian and Ishak 1991). The loss of coloration observed on sweetpotato dried chips and flours in the current study may be attributed to this same effect.

The best means of increasing total carotenoid and b-carotene contents of the products was by using flour. Adding sweetpotato flour to buns increased total carotenoids by 2000%, and 1000% when adding the boiled and mashed products, only a 700% was achieved when adding raw and grated sweet potato. Similar effects were recorded for chapatis and mandazis.

The results from this study clearly demonstrate how orange-fleshed sweetpotato roots can be used to improve the vitamin A content in foods and subsequently, the good health of consumers. The combination of good agronomic performance, high consumer acceptability and high carotenoid levels of the orange-fleshed sweetpotato cultivars makes an elegant and highly suitable delivery mechanism for combating vitamin A deficiency.

Acknowledgements

The authors are grateful to Isaac Njaci for carotenoid determinations. The study was funded by the International Potato Centre (CIP), Overseas Development Administration's Crop Postharvest Research Programme, and the International Centre for Research on Women (ICRW).

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Sian, N.K. and Ishak, S. 1991. Carotenoid and antocyanin contents of papaya and pineapple: Influence of blanching and predrying treatments. Food Chem. 39:175-185.

Table 2. Total carotenoids in processed products containing sweetpotato storage roots, cultivar CIP420027.

Product	**Dry matter, %**	**Total carotenoids,** (mg b-carotene equiv./100 product)	**Total carotenoids,** (mg b-carotene equiv./100 g dry matter)
Raw material:			
Fresh sweetpotato storage roots	21.6	4910.3±126.3	22732.9±583
Boiled and mashed storage roots	18.9	3408.2±34.6	18032.8±183
Storage root flour	88.7	13929.4±28.4	15703.9±32.0
"Elianto" cooking oil	99.5	98.3±17.6	98.8±17.7
Chapatis from:			
Raw and grated	68.4	1517.5±198.8	2218.6±290.6
Boiled and mashed	60.3	1092.0±34.6	1810.9±57.4
Sweet potato flour	68.6	2281.8±19.2	3326.2±28.0
Wheat flour	69.0	110.5±7.3	160.1±10.6
Mandazis from:			
Raw and grated	69.5	1485.4±332.0	2137.3±477.7
Boiled and mashed	59.8	1616.0±90.0	2702.3±150.5
Sweet potato flour	66.2	2119.3±82.8	3201.3±125.1
Wheat flour	68.3	109.1±2.7	159.7±4.0
Buns from:			
Raw and grated	67.2	802.2±21.0	1193.8±31.3
Boiled and mashed	66.8	1186.1±12.0	1775.6±18.0
Sweet potato flour	70.3	2228.4±45.6	3169.8±64.9
Wheat flour	69.3	117.2±6.0	169.1±8.7

5. Market Research Plans for the Commodity Groups

5.1 Root Crops

Prapace (Sweet and Irish Potato)

The PRAPACE network is working on two commodities sweet potato and Irish potato. At present the network is conducting no market surveys and following the 1999 PRAPACE steering committee meeting no market surveys were funded as part of the next year plan, i.e, for 2000. It was suggested that some market information may be available via other sources such as the COSCA survey or through key stakeholders such as P. Ewell or from the libraries of Universities such as Sokoine.

Sweet potatoes

The priority countries for sweet potatoes are Uganda, Congo, Burundi, Ethiopia, Kenya, Tanzania and Rwanda. In view of the importance of the market surveys for the new ASARECA strategy and USAID, PRAPACE has withheld $30,000 to support market sector analysis. The co-ordinator has requested that individual countries provide project proposals for market survey work, but responses in the form of proposals were only obtained from some partners. Apparently there was some concern that funding for sector analysis may not meet with PRAPACE priorities. The co-ordinator suggested that there may need to be a re-run of the call for proposals in regard to marketing. The co-ordinator clarified the point that the "call" is limited to steering committee members within the national research and therefore the potential for developing new partnerships was poor. As a result PRAPACE has not received any proposals for studying markets in Uganda, which is the highest sweet potato producing country in the region. Similarly despite Irish potato being a high priority in Rwanda, no proposals for market studies were received.

The co-ordinator made it clear that capacity to undertake market survey work is also very weak amongst the NARS and as such, strong partners or consultants would be needed to carry out this work. Tanzania is more promising with partners in TARO, funded via SARRNET and such groups may have access to students through Sokoine University. However, the need for a consultant to support marketing research was clear.

For the upcoming marketing training course PRAPACE intended to train people from Kenya, Madagascar, Burundi, and SARRNET has also indicated it will send 2 people from Tanzania. PRAPACE is also funding resource persons for the course. For market research PRAPACE was seeking assistance from FOODNET in the form of consultants to lead the market surveys and to co-ordinate the market training.

Potatoes

For Irish potatoes the situation was similar, there are no ongoing market surveys and at present PRAPACE has not allocated any funds for market survey work. The priority countries for potatoes are Ethiopia, Kenya and Rwanda, but to date, Rwanda has not submitted a proposal to do this type of work. Again capacity to undertake the work is very weak and this has meant that there is nobody available to lead or support this work. ISAR, the Rwandan national research organisation does not have a single economist.

EARRNET (Cassava)

EARRNET has developed an ambitious programme for market surveys in this phase of the network. There is considerable secondary information available through COSCA for cassava in Eastern Africa and CARE International in Madagascar, has plans to conduct baseline and market research studies on cassava.

At present EARRNET is a partner in the (FOODNET/ NARO/ NRI) market survey for cassava in Uganda and this work will be completed by May 2000. EARRNET does not have priority countries for market research and therefore plans to conduct full sub-sector market studies in all of its mandate countries including:- Congo, Burundi, Rwanda, Kenya, Uganda and Madagascar. EARRNET have allocated a funding envelope of $120-$150,000 in the first year for market sub-sector analyses.

According to the co-ordinator there is capacity in the region to undertake the work and following the most recent EARRNET steering committee – Socio economists available in all countries

Duration 1 year to complete all studies

- Linkage with FOODNET– Consultant to assist in specific stages of the research, but especially in analysis and report writing.
- Training have 3 places on the Marketing course

BARNESA (Banana)

Barnesa has no plans to conduct an market surveys in the year 2000. However, the co-ordinator is aware that some market studies are being undertaken by the Agri-business Centre, Ugadna and Makerere University, Uganda. One of the options that may be of interest to BARNESA would be to undertake market surveys for cross-border trade opportunities in Uganda, Kenya, Tanzania, Rwanda, Burundi, Eastern Congo.

The co-ordinator considered that capacity to undertake market research within the network was very limited and that there were limited resources for training at present. However, despite limited funds BARNESA would be funding 1 person to attend the Marketing course, with funding through FOODNET.

The co-ordinator was strongly in support of developing linkages with FOODNET and agreed that a consultant or trained persons would be needed to assist in the market analysis as the national banana programmes were only able to conduct physical science research.

The co-ordinator also suggested that the BARNESA steering committee were somewhat unclear about the benefits of market research. This problem may be applicable to many networks as the composition of the steering committees are almost entirely physical science researchers. The co-ordinator requested that FOODNET be represented at the next BARNESA SC to relay the marketing driven message to its members.

5.2 Grain and Pulse Crops

ECABREN (beans)

- Bean network is just starting on marketing research
- It is recognised that the market is the real problem
- Need improved market information
- Need to establish linkages with FOODNET to access technical support in marketing
- Will be sending 4 people to the marketing course

Maize

- Network is available (ECAMAW) backstopped via CYMMT.
- Considerable work has been done on Maize sub-sector analysis.
- Local quality of maize is a problem.
- High levels of competition with international market.
- Processing and storage of maize is well understood.
- Processing facilities such as hammer mills are widespread in the region.

Wheat

- Network is available (ECAMAW) backstopped via CYMMT.
- High value commodity with high demand for baked products.
- Strong competition from overseas.
- Local production is weak, low output and poor quality soft wheats.
- Local distribution and handling of product is poor due to small and atomised production sites.
- Competitive advantage in most countries is weak.
- Potential for future production may be good if varieties can be developed which provide hard wheat qualities.

Sorghum

- New network will come on-stream soon (ECASAM).
- ICRISAT is able to provide backstopping.
- Varieties are available.
- Processing needs to be evaluated.
- Products are limited.

Millet

- New network will come on-stream soon (ECASAM).
- ICRISAT is able to provide backstopping.
- Somewhat of an orphan crop.
- Needs more analysis for market opportunities.
- Processing is a problem.
- High cost of production is a problem in terms of competition with other grain crops.

Pigeon pea

- Renewed interest through support from ICRISAT.
- Linkage work has shown export potential exists and can be exploited.
- Work can be replicated in other areas.

5.3 Higher Value Crops

Oilseeds

- Main crops = Sunflower, sesame, Ground nuts and oil palm
- No network to support these activities
- Considerable work has been done and the first thing to do in this area would be to collate and summarise the findings from previous studies conducted by VOPSIN, VOPS, ROPS, Uganda Sub-sector, COMESA etc. An update of current information is required
- Key issues relate to basic agronomic work to improve production and to evaluate local efficiency versus overseas / international competition.
- There is a good potential spin-off from oil seed production especially with animal feeds.

Fish

- International Agricultural Research centre exists for Fisheries, ICLARM, but it is not operational in this region.
- National Fisheries Institutes are very weak, some assistance from Lake Victoria Environmental Management
- Large local and export potential and important nutritional contribution
- Important economic contribution to local communities
- High potential private sector involvement
- Key issues related to quality control and use of by-products such as oil and fish meal.

Horticulture

- No Network, AVRDC is operational in Arusha
- Very broad category
- IFAD and ADB intervention in Kenya
- Nutritional Benefits and Industrial uses
- High export potential and local markets needs
- Potential for value added processing medium and small-scale
- Key issues, seasonality, perishability, shelf life,
- Examples, Avocado oil, dried vegetables,juices,
- Commercialisation of indigenous / traditional crops

Livestock

- Especially diary, meat and eggs
- AARNET is EU funded
- Nutritional value is low consumption levels are generally very low
- Availability only during certain seasons surplus in others
- Need to develop a process to smooth out the demand and small-scale of particular interest
- Liberalisation of some markets needed
- Quality is critical
- Other issues, animal nutrition, health, utilisation of by-products, range management and range depletion need to be addresses, ILRI working in these areas.

Forest Products

- Probably the least well exploited commody group
- Environmental spin for marketing
- Honey
- Quality and collection issues are a problem
- NTRPs
- Mushrooms
- Gums
- Handicraft products

AFRENA

The AFRENA co-ordinator outlined the case that the network was currently undergoing a radical change in strategy and emphasis and that value added processing and marketing will become leading themes within the new look AFRENA. As such the teams working with AFRENA in the region would be informed about the FOODNET initiative and would develop proposals to submit to FOODNET in the competitive grants scheme.

6.0 Overview - Marketing and Network Linkage with FOODNET

R.Laker-Ojok

The role of FOODNET is to

1. Facilitate and source supplementary funding for the different commodity / sub-sector programmes in the region.
2. Harmonise the activities of the different commodity programmes through provision of
   - Market information
   - Technology information
3. Help establish linkages, including flow of information, between the various stakeholders operating within the different sub-sectors.
4. Facilitate the transfer of appropriate technologies in food storage and processing through the establishment of strategic pilot sites.
5. Facilitate capacity building within the various institutions participating in the different commodity programmes
6. Provide technical back-stopping to the various regional networks
7. Facilitate the promotion and utilisation / consumption / marketing research of various commodities within the region at the local, regional and international levels.

In regard to the marketing information. FOODNET should work in close collaboration with the commodity based networks to establish what is available already. For each of the commodity networks a real effort needs to be made to determine

- What marketing information already exists.
- Where are the gaps and
- can we devise rapid surveys to fill the gaps.

Problems clearly exist as to whether there is capacity within the countries at the national programme levels to provide market analysis.

Having done the marketing work FOODNET should play a key role in:-

- Identification of technologies that are available to add value to the commodities,
- What are the products on the market
- What are the processes that show promise
- What are the investment and human capital requirements for delivering the new technology

FOODNET should also seek to establish a list of partners working in this area.

- National programme staff
- International centre staff
- NGO workers
- CBOs
- Farmer associations

- Private sector groups looking for linkage with public sector operators.

The Sub-sector approach to market analysis is a logical approach to identify opportunities for leveraged interventions. However, to be most effective, FOODNET and the Commodity networks need to :-

- Conduct some simple priority setting by **(i) crop, (ii) product, (iii) country** etc.. to start to develop the plan of implementation
- Need to assess sector analyses with highest probability for pay-off taking into account the relative pay-offs when comparing on-farm and off-farm interventions.

Commodity based NETWORKS

- To ensure that strong linkage is made with FOODNET will require support from the co-ordination offices of the other Networks, this cannot simply be a one way approach from FOODNET.
- Seed funding for joint projects should ideally come from collaborating networks.
- Timely delivery of research products needs to be addressed, currently research projects are not well geared to delivering products and this will be a problem if several institutes are operating within one activity.
- Steering committee members need to be particularly vigilant that products are produced and that they share responsibility in getting the job done.
- FOODNET in collaboration with the other networks should seek other strategic alliances, with IARCs and AROs and Bilateral agents.

7. Developing Market Information Services

S. Ferris
Foodnet Co-ordinator
K. Muganga
Market Information Service co-ordinator

The IITA-Foodnet project started collecting commodity price data in January 1998, specifically for cassava and cassava based products. This information was required as part of the postharvest research, within a national cassava rehabilitation project. Information on cassava, the most important food security crop in Uganda, was not collected by the Government services and therefore a dedicated price monitoring system was put in place. As cassava is not produced or sold in isolation, market prices for 17 competitive or complementary commodities were also monitored at farm gate, wholesale and retail prices on a monthly basis in 13 districts, in the main cassava producing areas of Uganda, i.e. those districts surrounding lake Kyoga. The aim of this work was to provide an economic framework for the development and testing of new cassava-based agricultural technologies and products.

The need for cassava market information was based on the requirement to find new market opportunities for the rising levels of cassava being produced by farmers. In the late 1980s, a new and virulent form of the cassava mosaic disease decimated cassava production in Uganda and lack of cassava led to several cases of famine. Fortunately by the mid 1990s, cassava production was showing rapid growth again as a result of the introduction and mass dissemination of new, higher yielding cassava varieties, which were resistant to the mosaic disease. As the effect of the mass distribution of the new cassava varieties was translated into higher yields, prices for cassava products fell dramatically. The results were that although the farming communities re-attained food security, local markets were not able to absorb the crop surpluses. The effect was that many farmers refused to harvest their fields. The implication was that farmers would not take advantage of the higher yield potential of the new varieties, but would simply return to low subsistence production levels. To avoid the situation where farmers are unable to market more than just a small surplus, the cassava project set out to finds ways of improving the marketing efficiency of cassava, and work towards assisting farmers access new market opportunities. The aim being to provide farmers and traders with the type of market information they need to develop strategies, which will improve their market access.

The problem of poor market access is common to many crops in Uganda. Farmers are able to produce crops, but they have problems in finding markets to absorb their produce at a competitive price. The first tasks for the market information service was to ascertain (i) what types of information do farmers and traders already have, (ii) what types of information do they need and then (iii) how to deliver that information.

In a recent survey conducted by IITA (unpublished), most farmers indicated they were able to obtain some form of market information (61%) and that farmers considered prices to be the most useful form of information (90%). Further explanation revealed that farmers had a reasonable idea of which crops were in demand (54%) but only a vague idea of price trends (7%), even in their local market and market information was mainly gained through neighbours (74%). Nearly 20% of farmers had no access to market information and only a limited number of farmers were able to access information through sources such as radio and co-operatives. No farmers obtained gained information from newspapers, **Figure 12**. There have been some attempts from other NGOs such as the Ugandan National Farmers Association to provide information on input costs and commodity prices, but these bulletins have usually been outdated after the timelag for publication and distribution, (**UNFA, 1999**)

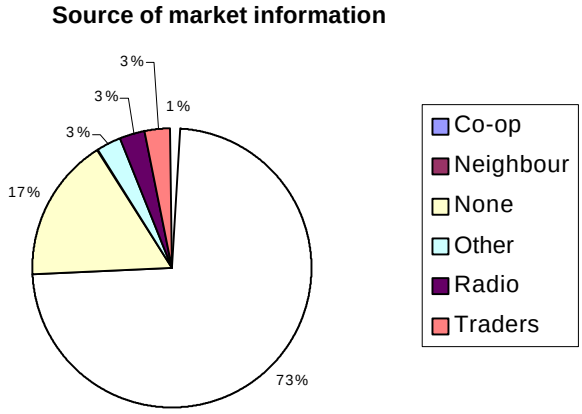


Figure 12 Farmer's sources of market information

Improving market Access

One of the underlying problems with improving market access is that if farmers are to bulk their harvests and to make more effective trading decisions, they need to be well informed about the market. Farmers need to have a good knowledge about their production costs, the types of inputs they need, varieties in demand, market prices, commodity standards, names or contacts for buyers and some ideas of market options. Specific types of market, whether it is local, regional or export, also require specific types of inputs and these include a combination of (i) technology inputs, such as variety, water, fertiliser and (ii) marketing information inputs such when is the best time to sell, what are the prices, price trends, who is offering the best prices, or demanding highest volume and what are the likely future production trends.

A conceptual diagram, **Figure 13**, shows some of the inputs that are required for the various market types. The information basically indicates that as farmers access more lucrative markets, there is a greater need for more sophisticated market information. The same conceptual framework is shown in **Figure 14**, and this diagram indicates the situation that prevails in much of Africa, in that not only do most farmers have no physical farm inputs, such as seed or fertiliser, they also have no market information to assist them in making the transition from subsistence to higher levels of marketing their produce. The information gap, shown in **Figure 14**, means that many farmers are resigned to the subsistence farming system unless some effort is made to provide the very basics in marketing information and that farmers are unlikely to make the types of changes that are envisaged in the "*Plan for the Modernisation of Agriculture*" in Uganda unless efforts are made to provide farmers and farmer associations with relevant market data.

Market information services in Uganda

In May of 1999, the Marketing News Service of the Ministry of Trade and Industry ceased to function. In October of 1999, the **Foodnet project** of the International Institute of Tropical Agriculture established the first phase of a market information service, to rehabilitate the national commodity price service. The new service collects wholesale and retail data for 17 crop commodities, and 4 meat products in 17 markets across the country, on a weekly basis. The data is collected from the following urban centers:- Kampala, Jinja, Kamuli,Iganga, Pallisa, Mbale, Soroti, Tororo, Kumi, Lira, Apac, Masindi, Gulu, Arua, Luwero, Mbarara, Rakai, Masaka, Kabale, Kasese. There are plans to extend this service to other market centres when supporting agencies working in these areas have been identified.

The data collection form, **Figure 15**, provides cost data and some idea of the levels of demand, supply, quantities sold and the comments section is used to describe any unusual events. In Kampala the data collection is more intensive, gathering data for 27 commodities, at four sites, including the two major urban markets and some of the larger trading organisations, on a daily basis, **Figure 16**.

In the initial phase of the new project, the aim is to make the data-set more reliable, more accurate and provide timely data sets to clients. At present, the price data is analysed and distributed in a format most useful for planning units in government, agricultural development programs such as IDEA and food security analysts such as FEWS.

The types of information that can be developed using the price data are shown in **Table 14**. These include, spot prices, i.e., "today's price for Maize", temporal prices and market trends as shown in **Figure 17** and spatial type data sets as shown in **Figure 18**. In the near future, it is hoped that the MIS will collect and provide information on volumes traded for specific commodities and also the types of standards commonly used in the key markets. Other types of information that will be developed include market options in terms of locality and product types and market news, "what the traders are saying" and the regional perspective.

The price information collected by the Foodnet MIS, is already feeding into the trade bulletins provided by the IDEA / FEWS projects. Starting in the year 2000, the MIS project will be publishing Uganda price data in the regional East African Newspaper and is already developing radio programmes which will cover trade news for broadcasting with local and national radio companies. The trade news will also be placed onto the Foodnet website, www.cgiar.org/foodnet in the first quarter of 2000. The problem however remains in that although the service to the policy groups is improving rapidly, the service for the real market agents, i.e., the producers and buyers requires considerable more effort and further support in terms of personnel to run the service and funds to enable the service to effectively meet the needs of the client groups at the micro-level.

Constraints to the service

Currently, the Foodnet MIS team is in the process of fine-tuning the data collation and analysis system, and revising the recipient listing for the basic price information. The MIS project is also actively seeking support from Radio, Newspaper publications to disseminate this information to a wider audience. This has proven somewhat difficult as the media wish to charge full commercial rates for the provision of market information and therefore additional funding is required to effectively serve the producing and trading sector, (**CBS, 1999**).

Areas which need further improvement and support

1. Lack of access to partners in the private sector.
2. Poor communications with current and potential partners in the field, especially the north of Uganda.
3. Lack of access to regional information.
4. Lack of systems for the delivery of market information to farmers.
5. High cost of radio broadcasting.
6. Lack of funding to support the micro-scale marketing service.

Table 3. Types of market information and clients

Types of information include:-	
♦ Temporal data	Market trends over short and long term
♦ Today's / Spot prices	See daily price sheets
♦ Spatial data	Comparisons between locations
♦ Volume traded	Measure rate of trading
♦ Product quality	Price for a specific grade
♦ Product differentiation	Changes in product range and value
♦ News	Policy changes, tariffs, legal actions, traders losses and gains

Public sector clients for the commodity price information, at the macro level include

- ♦ Ministry of Finance, Ministry of Trade and Industry, Ministry of Agriculture
- ♦ FEWS, USAID, CGIAR, NGOs
- ♦ Regional bodies including:- ASARECA, EGAT

Private sector clients for the commodity price information, at the micro level include

- ♦ Farmers
- ♦ Traders
- ♦ Processors
- ♦ Consumers
- ♦ Research organisations
- ♦ NGOs
- ♦ Extension

Figure 13 Conceptual analysis of market access

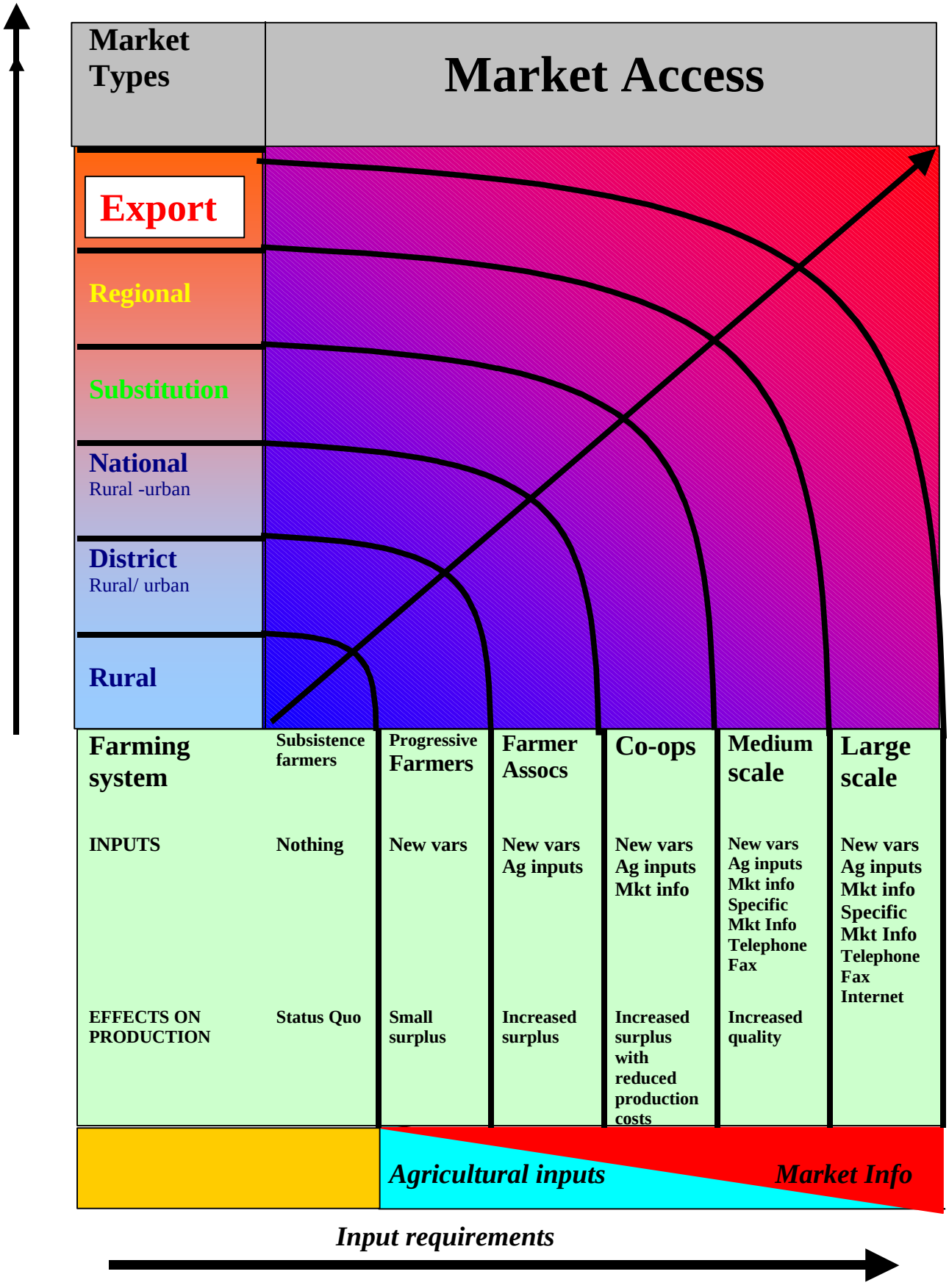
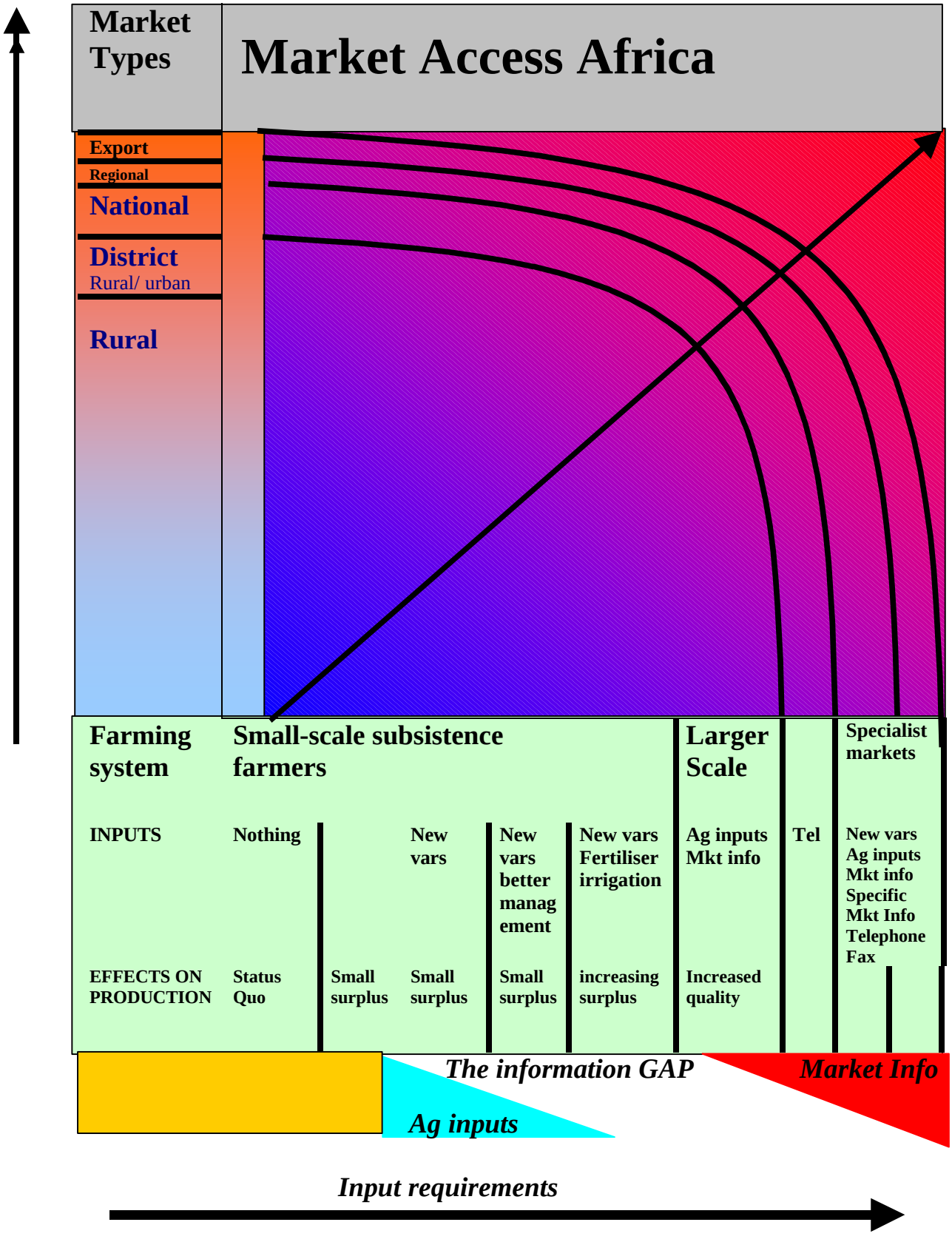


Figure 14 Conceptual analysis of market access in Africa



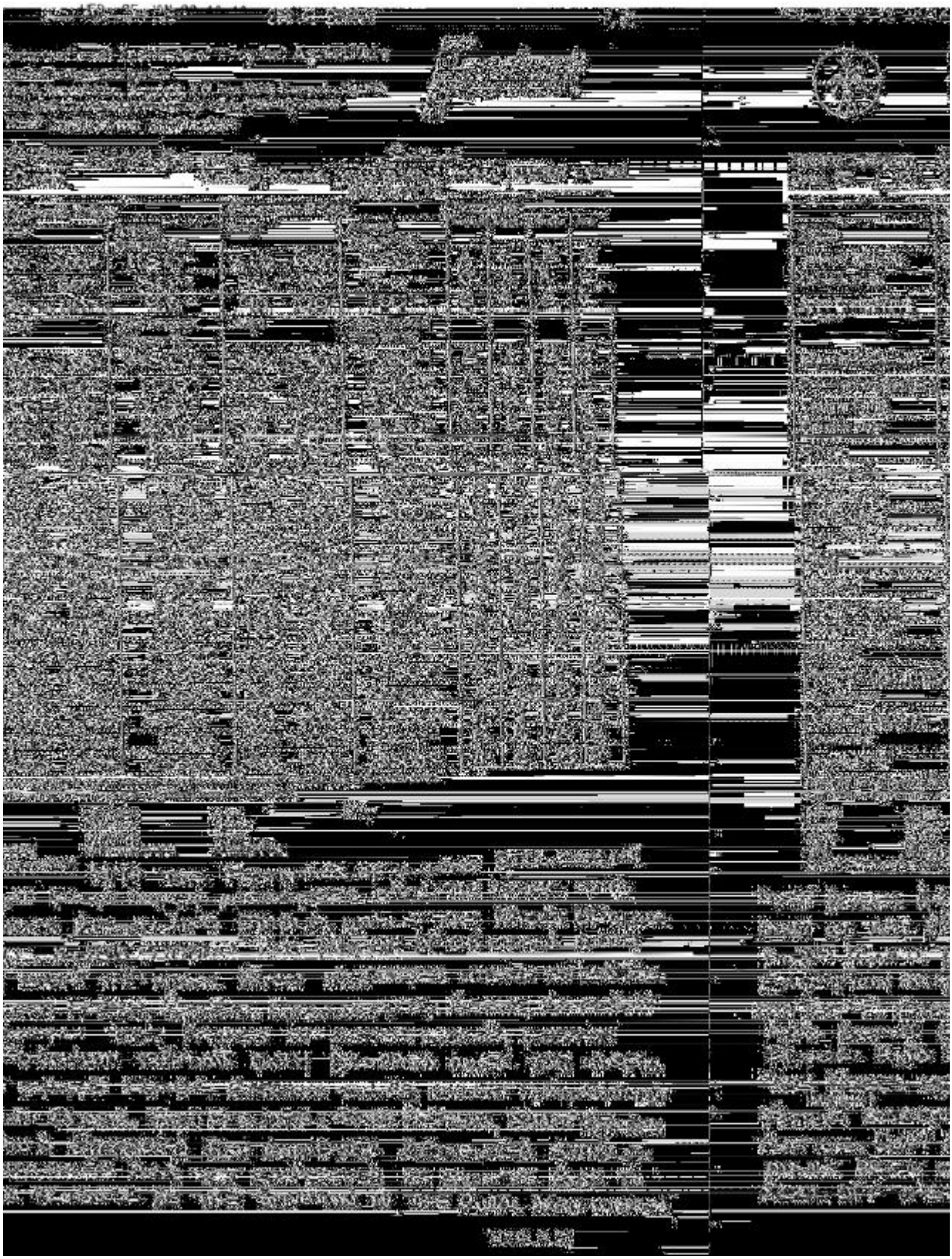


Figure 5 – Data collection form for weekly district level price information

Figure 6 Price data from Kampala collected on a daily basis

Market Information System, International Institute of Tropical Agriculture

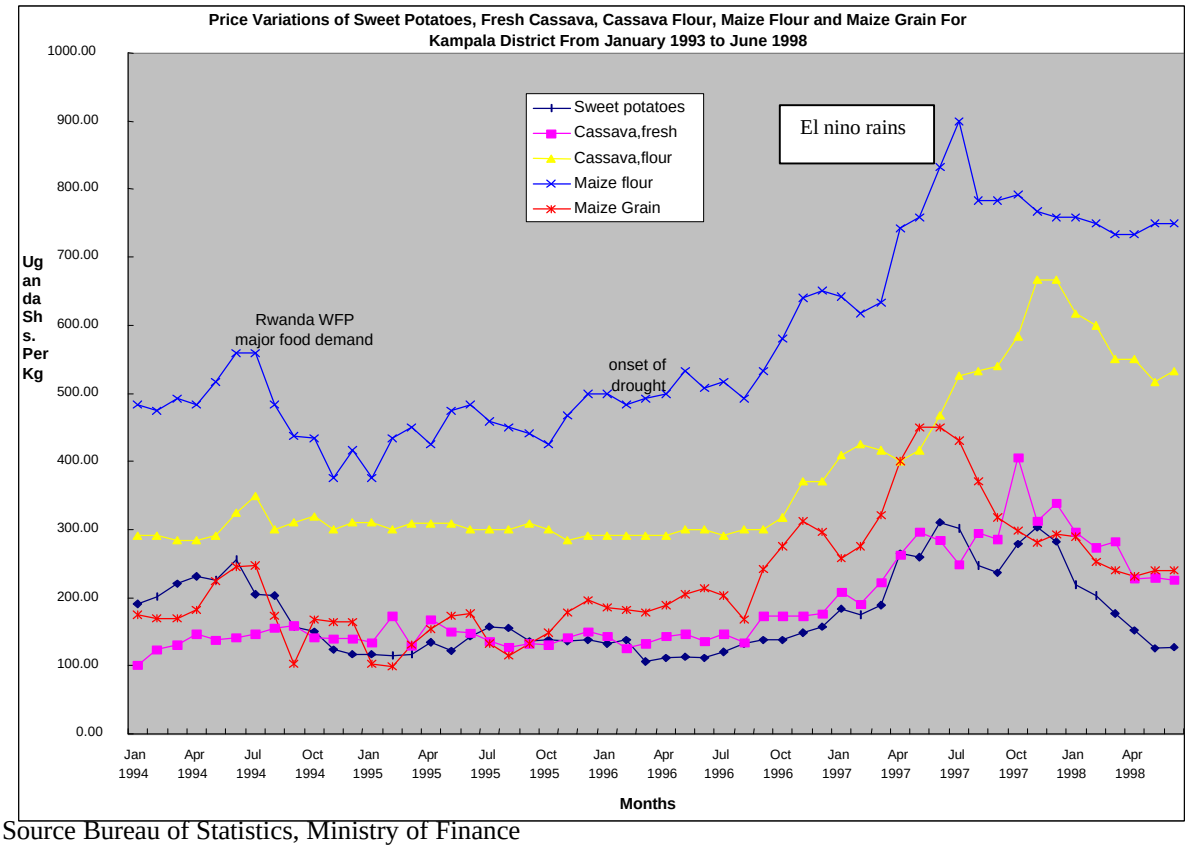
Tel: 256-41-223460, 077-221162, 077-221164; Fax: (256-41)-223459; Email: mis@imul.com

Plot 7, Bandali Rise, Bugolobi.

COMMODITY PRICES FOR KAMPALA DISTRICT -Monday, November 22, 1999 Shillings / kg

CLASS / GROUP	CROP	Kisenyi			Owino		
		Off Lorry	Wholesale	Retail	Off lorry	Wholesale	Retail
BULBS	*Onions*				600	700	800
CEREAL	Maize Flour	430	450	550	450	550	800
	Maize Grain	280	300	350	300	320	350
	Millet Flour	400	500	600	450	530	650
	Millet Grain	360	380	400	350	450	500
	Rice Threshed	600	700	800	600	700	800
	Sim Sim				850	900	1,000
	Sorghum Beer	300	350	400	290	310	350
	Sorghum Flour	220	250	300	290	300	350
	Sorghum Food	200	220	250	200	250	300
LEGUMES	Beans Large	280	300	400	270	300	400
	Beans Medium	240	280	350	250	270	350
	Beans mixed	200	250	300	250	330	350
	Beans small	300	320	400	280	320	400
	Cowpeas	700	750	850	750	800	900
	G.Nuts	1,200	1,280	1,300	1,210	1,250	1,300
	Grams	400	450	500	400	500	600
	Soya	370	400	450	500	600	700
OTHERS	Cocoa						
	Ginger				200	230	250
	Sunflower						
PLANTAIN	Banana/Matooke				320	420	550
ROOT/TUBERS	Cassava Chips	250	280	350	260	290	300
	Cassava Flour	280	350	400	300	350	450
	Cassava Fresh				200	270	300
	Potato Irish				260	310	450
	Potato sweet				120	140	200

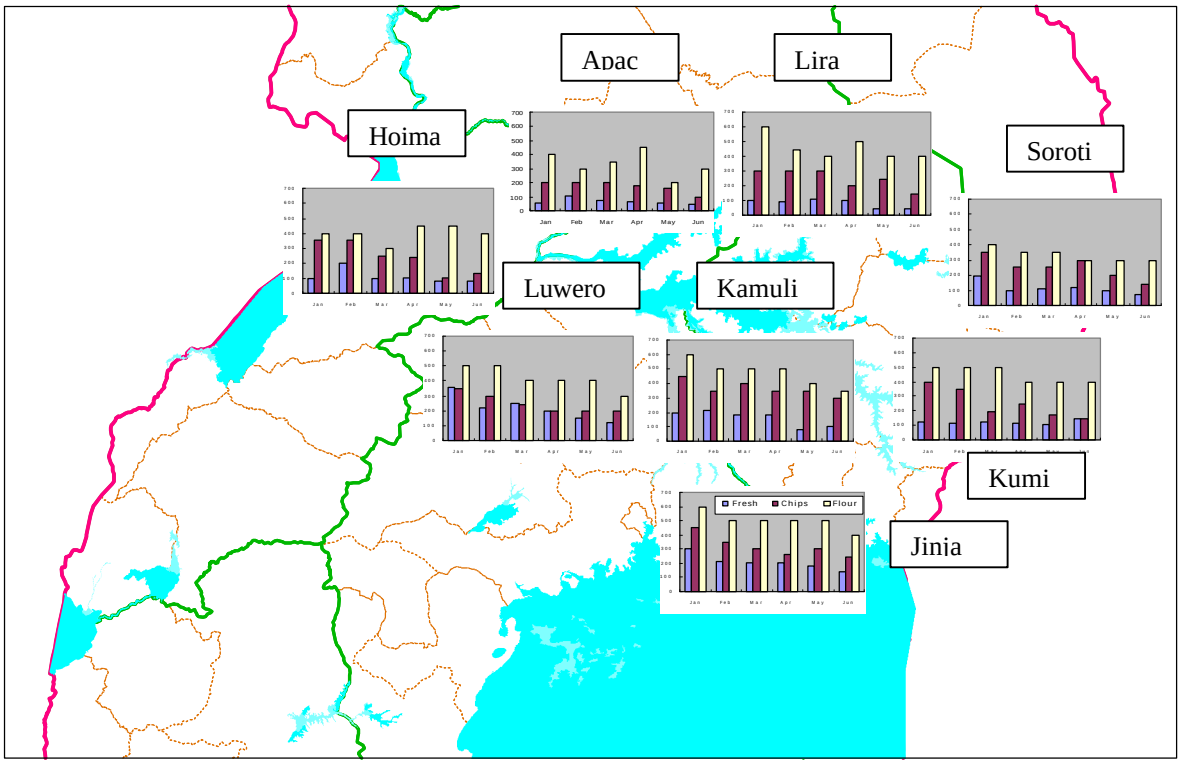
Figure 7 Temporal Market data



Source Bureau of Statistics, Ministry of Finance

Figure 8 Spatial Market Data

Uganda Consumer Prices of Fresh Cassava, Chips and Flour in Shillings per Kilogram for Selected Districts, 1998



Legend applies for all graphs, fresh cassava roots – blue, cassava chips – red, cassava flour – yellow

8.0 Recommendations for guidelines to fund research projects

Competitive Grants Fund

Guidelines for Presentation of Proposals

Introduction

The Foodnet Competitive Grants Fund has been established to provide seed funding for the identification and development of partnerships for market research and enterprise development activities in Eastern and Central Africa.

The fund offers grants of up to US$ 14,000 for each for the following types of research.

1. **Stand alone market studies to identify market opportunities / constraints**
2. **Market studies leading to the implementation of enterprise development projects**
3. **Enterprise development projects**

As suggested from the above, market research, which shows promising market opportunities, could lead to the provision of a second grant in enterprise development within this grant facility.

The main aim of the FOODNET grants should therefore be seen as an opportunity to carry out

1. market research with the aim of developing
2. small – medium scale agro-enterprises.

Grantees are expected to provide the following as a product of the award:

1. A research report that presents the results of the market study;
2. A project profile, which proposes the development of a commercial enterprise or research, which will overcome identified constraints in the marketing chain, based on the findings of the market study undertaken in **(1)** above.
3. In the case of enterprise development. Grantees will provide a case study for the establishment of the agro-enterprise and the process leading to commercialisation. This report should highlight the process used to develop the enterprise, the linkages used, an economic analysis of enterprise performance and the strategy used for either ongoing, or proposed methods of replication.

Grants **must** bring together partners from at least two agencies (defined to include national research programmes, research networks, international research centres, universities, non-governmental organizations, parastatal research organisations, community based organisations, farmer associations, and the private sector) in Eastern and Central Africa (ECA).

N.B. Grantees will only be eligible for one grant at any given time. The Foodnet grant system is non-renewable for a given activity.

Proposals that show clear linkage with at least one of the ASARECA networks are encouraged., (Annex 1* provides a list of the ASARECA networks). Links with the private sector should be emphasized. *In cases where capacity to undertake specific tasks are unavailable and consultants are required, this should be noted as a clear priority in the proposal.*

Where consultants have been identified, specific information should be supplied on the selection of the consultant and the capacity of the consultants organisation. In cases, where partners are seeking information on potential consultancy groups, please contact the FOODNET co-ordination office for further information on a preferred list of consultants or bilateral agents, which may have support staff to assist for specialist skills.

Research proposals must relate to interventions in the production-consumption continuum, and demonstrate a clear market and client-oriented approach. Particular emphasis will be paid to value-added and income generating issues. Research must be replicable and relevant in more than one country, and in accordance with the research priorities of the ASARECA networks. The methods and techniques to be used to ensure participation of client groups in data analysis need to be clearly stated in the proposal, as should the roles of the respective partners.

Research Themes

The types of studies that will be considered for grant awards include the following:

1. **Market studies** that analyse existing production, processing, marketing and consumption systems for particular commodities, and prioritise among, the post-production constraints and opportunities identified. The objective of this type of sub-sector analysis being to identify market opportunities and constraints to the marketing channels of a commodity. Results from such studies should indicate strategies for securing increased income or food security potential;
2. **Market studies** that seek to identify viable opportunities for the development of small-medium scale agro-enterprises. Such studies should evaluate the technical (production and processing) and economic feasibility and appropriateness of a given process in the small-medium scale farm situation;
3. **Enterprise development** schemes that deal with the establishment and commercialisation of an agro-enterprise based on market opportunities identified through market / sub-sector analysis.
4. **Product research**, concept testing and consumer acceptance studies to generate pre-feasibility data on novel products that could have production potential in rural and urban areas.
5. **Service support studies** that analyse the service / input support to small-scale postharvest processing and marketing enterprises (such as infrastructure, credit, transport, marketing and market information, machine workshops, training and technical assistance in business administration, marketing and processing), with a view to proposing innovative approaches for the supply of these services.
6. **Policy studies** that evaluate policy constraints and the options for improving policy to facilitate development of enterprises and marketing in rural areas.
7. **Adoption and impact studies** on previous post-production research and development interventions that provide information for orienting subsequent research investment in a particular field;

For this call, priority will be given to proposals that focus on the priorities of the ASARECA networks and identification of market opportunities for sales of value-added products. The research undertaken should be relevant to more than one country. However, it is understood that the above studies are likely to be focused on representative regions or micro-regions within countries.

Duration of the Projects

A maximum of 12 months will be permitted for the completion of the studies financed by the Fund.

Timetable for Grant Applications and Awards

5 January 2000. Call for applications. (concept notes – max 6 pages)

20 March 2000. Applications for grants due at FOODNET co-ordination Office Kampala.

Screening of concept note by review panel

31 March 2000: Successful concept notes returned for development of full proposal.

30 April 2000. Submission of full proposal.

1-5 May, 2000. SC convenes to review proposals

8 May, 2000. Announcement of successful projects

Subsequent calls for applications may be made on an annual basis as funds allow.

Review Panel

For Panel selections see page 75

According to the schedule above the first cut selection will be held from 27-29 March, at the Foodnet offices, Kampala.

Criteria for Evaluation of Grant Proposals

Mandatory criteria

- The proposal should involve at least two agencies involved in agricultural research / development, (defined to include universities, non-governmental organizations, public research organizations, international research centres, community based organisations, farmer associations and private businesses related to the agricultural and food sector) in the ASARECA region (see Annex 1*). **The role of the partners must be clearly stated. A supporting letter that commits the partners to the project must accompany the proposal.**
- The proposal addresses post-production research in one of the theme areas described above.
- The support requested from the Small Grants Fund **does not** exceed US$ 14,000, and counterpart contributions, in personnel and other resources, are clearly identified. ***Preference will be given to those proposals, which have supporting funds, particularly those with support from other ASARECA networks.***
- The proposal is presented according to the format requested (see below and Annex 2*).
- The proposal is consistent with the crops and ecosystems prioritised by ASARECA networks (Annex 1*).

Essential evaluation criteria

- Recognition of strategic issues that require further research, and innovativeness and originality in the use of research methodologies.
- Contribution to reduction of poverty and sustainable agricultural development through generation of income, employment opportunities and/or resource conservation in rural areas, with a direct bearing on the wellbeing of women and children.
- Clear demand-driven approach, with appropriate participation of the intended beneficiaries in the analysis and definition of the problems to be tackled.
- Appropriate employment of research methods (participatory approaches, market research, cost benefit analysis etc.).
- Shows evidence that the project will have a strong positive impact on key development indicators such as :- household food security, income, nutritional status, gender equity.
- Comparative advantage of the participating institutions and the sustainability of the institutional collaboration proposed. ASARECA networks are expected to contribute with inputs of a financial and strategic nature (e.g. support for research methods, specialized techniques and information, and analytical tools).
- Consistency with regional priorities for research in the post-production sector.
- Shows sound consideration for environmental conditions.

Negative criteria

- Proposals that only appear to fund workshops, training programmes, problem identification and participatory appraisals.
- Proposals that only consist of per diems or have a very high percentage of capital costs.
- Proposals that have multi-goals, i.e., are not sufficiently focussed.
- Proposals that do not clearly identify roles and responsibilities of partners.

Eligible Expenditures

Expenses related to information collection and analysis (per diems, short term contracts for specialist input, training costs of local personnel in specific survey or information gathering techniques, local transport, survey costs, statistical analysis, copying and report preparation).

Expenses related to planning meetings among partners (travel and per diem costs, materials, and other logistical requirements).

Salaries of principal researchers of the participating institutions are excluded.

Co-funding of the proposals, in kind, through time input of scientists and the provision of operational expenses, is required.

Non eligible Expenditures

Due to the size of the grant it is suggested that the projects do not include large capital items which are required for institutional capacity building:- **such as*:- computers, vehicles, large items for laboratory testing.***

Procedures for Submitting Applications

Proposals may be submitted by *bone fide* institutions working in areas related to agricultural and rural development. Proposals can be presented in the English or French language. **Preference will be given to those proposals submitted by institutions that clearly show the strategic research input of their linked ASARECA network. The budget may be managed by a participating institution that is not necessarily the executing institution.**

Applications must arrive at the FOODNET Office with attention for (Shaun Ferris), FOODNET, 7 Bandali Rise, Bugalobi, Kampala, Uganda by **20 March, 2000**. Applications may be sent by fax or e-mail (fax: 00256-41-223459, e-mail FOODNET@imul.com) but it is advisable that email copies be matched by paper copies sent by airmail or courier and postmarked before 1 March 2000. Electronic copies should be submitted in Word or a compatible format. Proposals will be evaluated by an independent panel of experts according to the criteria outlined above. Awards will be announced in the second week of **May 2000.**

Application Format

Concept notes should be six pages maximum. They should be presented in the format outlined in Annex 2*.

Foodnet grant recipients should be prepared, immediately after announcement of awards, to supply the formal name and business address of the institution to which payment should be made, with specific instructions on directing grant payments (name of bank, address and account numbers etc.).

Use of the Products of the Award

The series of reports produced as a result of the research undertaken with the resources from the fund will be subsequently published in book form and/or on the world wide web. Final reports should not exceed 50 pages (double space and font size 12), including tables and figures. As a means of ensuring relative uniformity, further guidelines for the presentation of the final reports will be made available to award winners. Follow-up project profiles should not exceed 6 pages and the format to be followed will be similar to that for the Foodnet Grant applications outlined above. The institutions that receive awards will be at liberty to submit their project profiles to donors of their choice. They will also be made available through the Network.

Annex 1*. Asareca Networks

	Name	Contact points	Areas of specialisation
1.	**Mimi Gaudreau**	IRRI Representative in Madagascar B.P. 4151 Antananariva 101 MADAGASCAR Tel: 261-20-62-23264 Fax: 261-20-62-23151 E-mail: m.gaudreau@cgiar.org	Rice research
2.	**Ann Stroud**	Coordinator African Highlands Initiative ICRAF – AHI P.O. Box 6247 Kampala, UGANDA Tel: 256-41-566722/566432 Fax: 256-41-567635 E-mail: A.Stroud@cgiar.org	Natural resource management in highland ecologies
3.	**Thomas Payne**	Coordinator ECAMAW / CIMMYT P. O. Box 5689 Addis Ababa, ETHIOPIA Tel: 251-1-615-017 Fax: 251-1-614-015 E-mail: T.PAYNE@CGIAR.ORG	Maize and Wheat research
4.	**James Whyte**	Coordinator EARRNET IITA/ESARC P. O. Box 7878, KAMPALA Tel: 041-223460 Fax: 041-223459 E-mail: jwhyte@imul.co	Cassava research
5.	**Mukishi Pyndji**	Coordinator ECABREN P. O. Box 2704 ARUSHA, TANZANIA Tel: 255-57-2268 Fax: 255-57-8557 E-nciat-ecabren@yako.habari.c Ciat-ecabren@cgiar.org	Beans research
6.	**Shaun Ferris**	Coordinator FOODNET IITA P. O. Box 7878, Kampala, UGANDA Tel: 000256 41 223460 Fax: 00025641 223459 E-mail: FOODNET@imul.com	Marketing and Postharvest researc
7.	**Eldad Karamura**	Coordinator INIBAP/BARNESA P. O. Box 24384 KAMPALA Tel: 256-41-286213 E-mail: Inibap@imul.Com	Banana research
8.	**Berhane Kiflewahi**	Coordinator ASARECA/CIP Technology Transfer Project International Potato Centre (CIP) P. O. Box 25171 NAIROBI, Kenya Tel: 632054 / Fax: 630009 E-mail: B.kiflewahid@CGIAR.ORG	Technology transfer

9.	**Berga Lemaga**	Coordinator PRAPACE P. O. Box 22274, Kampala, UGANDA Tel: +256 41 286209 Email prapace@infocom.co.ug	Sweet potato and Irish potato
10.	**Kwesi Atta Krah**	Coordinator ICRAF Agroforestry P.O. Box 30677 Nairobi, Kenya Telephone: 254-2-524230/521450 Fax: 254-2-521001 Email: K.Atta-Krah@cgiar.org	Tree crops research
11.	**Isaac Minde**	Coordinator ECAPAPA P. o. box 765 Entebbe, UGANDA Tel: 256-41-320425 Fax: 256-41-321126 E-mail: ecapapa@imul.com	Policy analysis
12.	**Jean Ndikumana**	Coordinator A-AARNET International Livestock Research Institute (ILRI) P. O. Box 30708, NAIROBI Tel: 254-2-630743 Fax: 254-2-631599 E-mail: jndikumana@cgiar.org	Livestock research
13.	**Dennis Rangi**	Facilitating for Coffee research Regional Representative CABI – Africa Regional Centre P. O. Box 633, Village mkt, NAIROBI Tel: 2-521450 Fax: 2 522150 E-mail: D.RANGI@CABI.ORG	Coffee research
14.	**Barnabas Mitaru**	Interim Chairman, ECARSAM IDRDU, University of Nairobi, Kenya P. O. Box 29053,NAIROBI Tel: 02-631638 Fax: 02-631102 E-mail: mitaru@arcc.or.ke	Sorghum and Millet research
15.	**Nuhu Hatibu**	Interim Coordinator SWMNet Senior Lecturer, Faculty of AgricultureSoi Water Management Research GroupSokoi University of Agriculture P.O. Box 3003 Morogoro, Tanzania Tel: 255-56-3847 Fax: 255-56-4562 E-mail: swmrg@suanet.ac	Soil and water management

Country representatives for FOODNET

1.	**Jean Paul Bitoga** DG of ISABU/Burundi P. O. box 795 Bujumbura, BURUNDI Tel: (257) 227602 223390 Fax: (257) 225798 E-mail: isabu@cbnif.com	6.	**Ranaivoson Roger Lalao** Post Harvest Département de Recherche Technologies/FOFI B.P. 254 Antananarivo 101, Madagascar Telephone: 22-402-78, 22-408-66 Email: fofifa@dts.org
2.	**Singi Lukombo** Food Science PRONAM INERA B.P. 2037 Kinshasa I, D.R. Congo Fax 00253-1221-326871-150-361 Email: ungc@ic.cd	7.	**Dr. B. Munyanganizi** Acting Director General ISAR Rubona B.P. 138 Butare, Rwanda Telephone: 070-78768 Fax: 070-78768 Email: iita@rwandatel.rwandal.com
3.	Eritrea To be identified	8.	**Mubarak Ali** Food Research Centre Khartoum North P.O. Box 213 Sudan Fax: 249-11-311049 Telephone: 249-11-311294 Email: Frc@sudanet.net
4.	**Dr. Demese Chanyalew** Institute of Agricultural Research (IAR) P.O. Box 2003 Addis Ababa, Ethiopia Telephone: 251-1-184136/612633 Ext. 215 Fax: 251-1-611222 Email: iar@telecom.net.et	9.	**Godwin D. Ndossi** Tanzania Food and Nutrition Centre 22 Ocean Road P.O. Box 977 **Dar-es-Salaam, Tanzania** Telephone: (255-51) 780378/9, (255-51) 118137/9 Fax: (255-51) 116713 Email: tfnc@muchs.ac.tz
5.	**Vital Hagenimana** Postharvest Scientist International Potato Center P.O. Box 25171 Nairobi, Kenya Telephone: 254-2-632054/630003/4 Fax: 254-2-630005 Email: v.hagenimana@cgiar.org	10.	**Dr. Ambrose Agona** National Post-Harvest Research Programme Kawanda Agricultural Research Institute P.O. Box 7065 **Kampala, Uganda** Telephone: 256-41-567708 Fax: 256-41-567649 Email: karihave@starcom.co.ug

Annex 2*. Format for the presentation of proposals to the Foodnet Competitive Grants Fund

Title page

This page should contain the following information:

- The title of the project.
- The executing institution and the name of the designated project manager, with the full postal address, telephone, fax and e-mail address for correspondence.
- The name of the participating institution that will manage the budget, if different from the executing institution.
- The names of the other participating institutions.
- Names of the key individuals involved in the project and their roles and responsibilities.
- The purpose of the project.
- The amount of the financial support requested from the Foodnet Grants Fund.

Project description

The project should be described, in no more than 5 pages, according to the following headings:

1. **General development goal.**
2. **Project purpose.**
3. **Background and justification.**

   This section should identify: (i) the problem or opportunity and its importance to the development needs of the country or region, (ii) the intended immediate users of the results and the final beneficiaries, (iii) the anticipated impact on food security, income generation and/or sustainable resource management.

4. **Outputs and activities.**

   This section should specify each research output, together with a short description of the activities that need to be undertaken to achieve the output (special attention should be given to describing the research methods to be employed), e.g.:

   Output 1. _____

   Activity 1.1 _____

   Activity 1.2 _____

   Activity 1.3 _____

   Activity 1.N _____

   Output 2. _____

   Activity 2.1 _____

   Activity 2.2 _____

   Activity 2.3 _____

   Activity 2.N _____

5. **Relevance to regional priorities.**

   This section should make a reference to statements issued by regional organizations that indicate the priority for the area of research or development need addressed by the proposal.

6. **Innovativeness and originality.**

   This section should succinctly state what is innovative and how the proposed research represents a significant departure from other work in this area.

7. **Institutional collaborating partners and their role in the project.**

   This section should briefly state the expertise that each participating institution will bring to the project and their relevant prior experience in the area of research or development.

8. **Project management.**

   This section should describe how the project is to be managed. The executing institution and the designated project manager should be named. If the institution that will manage the budget is different from the executing institution, arrangements for budget disbursements should be explained.

9. **Project budget.**

   The budget should provide the following information:

Items	**Requested from Sma Grants Fund. US$**	**Contribution of participati institutions. US$**
Personnel costs		
Supplies		
Services		
Travel		
Equipment		
Other (specify)		
Total		

The budget table should come accompanied by explanatory notes where appropriate. Contributions in-kind (e.g. infrastructure, equipment, etc.) should be noted.

10. **Chronogram (timetable) for project implementation.**

Annexes. A letter from the participating international agricultural research centre(s), that specifies the support and participation of the centre in the project, must accompany the proposal.

Letters from other participating institutions in support of the collaboration should also be appended to the proposal.

Proposed method of funding

Payments for the projects will be made using a purchase order approach as recently adopted by USAID. The purchase order will be written for the product, which will be a marketing report or an enterprise with a development and current business report.

Payments will be made in three instalments.

1. On approval of the project, a first instalment of between 50% of the approved budget will be paid made to the grantee.

2. A second instalment of 30% of the agreed budget will be given to the grantee on receipt of a draft copy of the final report.

3. A final instalment of 20% will be given to the grantee on delivery of the final report.

The grantees will receive a Terms of Reference (TOR) for their particular study. If the TOR is for a study, the questionnaire should be submitted to the Foodnet co-ordination office before the survey is done. As indicated by the TOR, this may include submission of pre-testing results to assist in making sure that information being gathered is both relevant and useful.

Call for Proposals and programme for selection

1. One call to be made for the three types of projects

A call As advised by the steering committee, the call for proposals was made using the following methods:-

- Email, with request to copy to other partners
- Steering committee members
- ASARECA
- Network Co-ordinators
- Newspapers (East African Newspaper)
- Universities
- Addresses of focal people in the Foodnet "larger circle" To facilitate this process an address list was developed which is available on the Foodnet website.

9.0 Selection of Candidates for the Project review committee

The project review committee was set up to review the first round of FOODNET grants. This committee was made up of people who were recommended by the FOODNET interim steering committee but only included one person who was on the proposed Steering committee. This was done to avoid conflicts of interest when reviewing the projects.

1. **Clive Drew** (Chief of Party, Agribusiness Development Centre, Uganda)
2. **Edward Karuri** (Senior Lecturer Food Science Department, Nairobi University)
3. **Ade Freedman** (Economist - ICRISAT, Kenya)
4. **Ambrose Agona** (NARO, Uganda)
5. **Godwin Ndossi** (Director, TFNC, Tanzania – Chairman Foodnet)
6. **Isaac Minde** (Co-ordinator, ECAPAPA, Regional)
7. **Tom Remington** (Regional Co-ordinator, Catholic Relief Services, Regional)
8. **Isaac Minde** (Co-ordinator ECAPAPA)
9. **John Mullenax** (Agricultural Advisor – REDSO-USAID)
10. **S. Ferris** (Co-ordinator FOODNET)

10. Selection of Candidates for the Steering committee.

No	Name	Institution	Country
		National Research Institutes	
1	Ambrose Agona	National Post-Harvest Research Programme Kawanda Agricultural Research Institute (NARO)	P.O. Box 7065 Kampala, Uganda Telephone: 256-41-567708 Fax: 256-41-567649 Email: karihave@starcom.co.ug
2	Demense Chanyalew	Ethiopia Institute of Agricultural Research (IAR)	P.O. Box 2003 Addis Ababa, Ethiopia Telephone: 251-1-184136/612633 Ext. 215 Fax: 251-1-611222 Email: iar@telecom.net.et
3	Samuel M. Wambugu	Kenya Industrial Research & Development Institute (KIRDI)	P.O. Box 30650 Nairobi, Kenya Telephone: 254-2-554710 or 254-2-535990/66/84 Fax: 254-2-540166 or 254-2-505546 Email: dirkirdi@arcc.or.ke
4	B. Munyanganizi	Institute of Sciences for Agricultural Research	ISAR Rubona B.P. 138 Butare, Rwanda Telephone: 070-78768 Fax: 070-78768 Email: iita@rwandatel.rwandal.com
5	G. Ndossi	Tanzania Food and Nutrition Centre **CHAIRMAN**	22 Ocean Road P.O. Box 977 Dar-es-Salaam, Tanzania Telephone: (255-51) 780378/9, (255-51) 118137/9 Fax: (255-51) 116713 Email: tfnc@muchs.ac.tz
6	Mubarak Ali	Food Research Centre	Khartoum North P.O. Box 213 Sudan Fax: 249-11-311049 Telephone: 249-11-311294 Email: Frc@sudanet.net
7	Professor Kinkela Savy	University of Kinshasa	Associate Professor P.O. Box 838 Kinshasa XI DRC
8	Dr Ramanoelina Panja	College of Agricultural Sciences	Madagascar

No	Name	Institution	Country
		Non Governmental Organisations	
9	Steve Walls has left. Need to find his replacement	Technoserve	Arusha Tanzania
9a	Tom Remington	Catholic Relief Services	Catholic Relief Services 2nd Floor, Rank Xerox Building Westlands POBox 49675, Nairobi, Kenya Email - tremington@crsearo.org Tel 254-2-750788 Fax 254-2-741356
10	Rita Laker-Ojok	Appropriate Technology (Uganda)	P.O. Box 8830 Kampala, Uganda Telephone: 256-41-543846/540024 Fax: 256-41-543929 Email: rojok@imul.com
11	Speciose Katangwe	World Vision	3 Rue Depute Kamuzinzi BP 1419 Kigali Rwanda Tel - 250-75762 Fax – 250-76229 Speciose_Kantengwa@wvi.org
		Private Sector	
14	Director	Soy – Afric	Kenya
15	Director	Midema Millers	DRC
16	Director	This person may rotate as circumstances evolve Target options, banker, accountant, fiscal advisor	Centenary bank

No	Name	Institution	Country
		Ex Officio Members	
1	G. Mrema	Executive Secretary ASARECA	ASARECA P.O. Box 765 Entebbe, Uganda Telephone: 256-41-20212/320556/321389 Fax: 256-41-321126 Email:asareca@imul.com
2	S.Ferris	Foodnet Coordinator	7 Bandali Rise P. O. Box 7878, Kampala, Uganda Tel: 041-223460 Fax: 041-223459 E-mail: foodnet@imul.com
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11. Proposed Training courses

11.1 Market Analysis

The marketing analysis course aims to provide researchers and NGOs with skills is methods to analyse markets and conduct simple cost benefit analysis. It was proposed that the first course be held in English and a follow on course be held in French. For more details **see Annex 7**

11.2 Enterprise development

The enterprise course was planned as a support training to the enterprise groups, which will be defined by the projects to be funded through the competitive grants scheme. This training course has been developed by the Agro-enterprise team in CIAT, Columbia. For more details see **Annex 8.**

11.3 Engineering fabrication course

This course will be conducted by the newly appointed IITA, engineer based in Tanzania. This training will develop capacity in the region to fabricate the root crops processing equipment. Details of this course are yet to be developed.

11.4 Study tours

An important aspect of developing capacity is to learn new ideas and see how farmers in other countries have dealt with problems, which are also being encountered in Africa. In much of the tropical regions of South East Asia, farmers and processors have taken the first step in mechanising root crop processing and using simple equipment have been able to improve output, quality and product range. The intention of this course is to take a small group comprising researchers and engineers to see how root crop processing is being done in Vietnam and China.

12. For Foodnet Information Systems

1. **Marketing information system in Uganda MIS@imul.com**

2. **See Website for full details**
    1. About FOODNET
        - About the network
        - About ASARECA
        - About the ASARECA portfolio

    2. Marketing information
        - Price data
        - Market Access strategies
        - Trade News

    3. Enterprise development
        - Project case studies
        - Strategies for enterprise development
        - Processing equipment
        - Products

    4. Information
        - Newsletters
        - Diary
        - Address list
        - Linkages
        - Monitoring and Evaluation site

3. **Newsletter – Phaction News**

4. **CD ROMS – Phaction information in process**

12.1 Foodnet HOMEPAGE http//www.cgiar.org/foodnet

Marketing & Postharvest Research in Eastern and Central Africa

Menu

Foodnet is an ASARECA network funded by USAID

The FOODNET pr[illegible]e of regional agricultural res[illegible]ment network focusing on ma[illegible]et-oriented research and sales of value added agricultural products.

The network has three main objectives and is seeking partnerships with a range of public and private sector partners to undertake:-
(i) market research,
(ii) postharvest research and,
(iii) implement commercial agro-enterprise activities.

Market analysis
To Promote the use of market information and methods for market analysis in agricultural research to identify market opportunities or key constraints within the production to marketing chain,

Agro-enterprise development
To work in collaboration with a range of public and private sector agents to catalyse and develop small to medium scale agro-enterprises which add value to low value primary commodities.

Training and information exchange
To assist in developing skills for implementing market oriented research and developing innovative methods for information exchange.

About the Foodnet Project
For more information about the Foodnet project, ASARECA and the other ASARECA Networks in Eastern and Central Africa

About the project | Market Information
Agro-enterprises | Information and training exchange Search

13.0 Wrap up of the Meeting -

Clive Drew

The tasks set at the start of the meeting were followed fairly closely throughout the meeting. Time has been well allocated and some executive decision by the group enable more time to focus on key issues such as the grants guidelines and the operational side of the FOODNET programme. My task now is to provide a summary overview of how well we have done at this meeting, what has been achieved and where more work is needed.

Task 1 Workshop participants to familiarise themselves with the FOODNET strategy.

This aspect of the meeting was well covered with a number of talks on the strategy, how the network fits into the ASARECA agenda and the concept of market chain analysis. I feel that the members of the steering committee now have a good understanding of what FOODNET is trying to achieve and the debates throughout the course of the meting have shown that members are clearly interested in the strategy and are motivated to see that targets are achieved. Overall I give this task a 8 out of 10 a job well done.

Task 2 To determine where the most apparent and productive linkages can be developed between FOODNET and the commodity networks as indicated by the network co-ordinators and discussions.

This aspect was chiefly supported by the other network co-ordinators and representatives who have attended this meeting, namely from BARNESA, ECABREN, EARRNET, ECAPAPA, AFRENA and PRAPACE. As the other networks are yet to be funded it is perhaps too early to say that we have achieved integration with the grain networks. Therefore, the linkages will be best developed with existing networks and general agreements have been sounded to that effect. The proof of these commitments will be seen later when the activities begin. As this aspect is only at the early stages I'll give this a 6 out of 10, it shows promise.

Task 3 To design the basic outline for the market research strategy. This will be discussed in three working groups which have been divided into market commodity groups as follows (i) Root, Tubers and Bananas, (ii) Grains and Pulses (iii) Others which will include higher value crops, niche crops and livestock options.

This aspect of the strategy needs more attention. The three commodity group discussions did not really make a lot of progress and for the most part the Steering committee preferred to work in plenary and discuss the broader issues. On balance I think this was the right decision and good progress was made in the areas which were considered most important. Again, as the existing networks are more involved with root crops this is the area where most progress was made and were plans are most advanced. Clearly more work does need to be done in the grain crops area and as ASARECA does not support the higher value type crops it is not easy to see where this type of activity will go. At this stage I can only give this section a 5 out 10. More work required.

Task 4 To design a programme for the implementation of enterprise development schemes based on ongoing activities, potential linkages with the private sector, training needs and market information.

As most of our time was spent discussing the ideas for marketing research, we did not really debate this issue. As elaborated on in the strategy session, some thinking has been done in this area but again this aspect needs to be reviewed and a lot more work needs to be done in this area, if we are to have a viable and useful strategy which can be used by our researchers and clients to develop successful agro-enterprises. As little has been done in this area as yet I will have to give a 3 out of 10, more work needed.

9 November, 1999

Task 5 Debate and harmonise ideas from across the commodity groups.

We had one session of work on this and it was clear that at present the various commodity groups are working with very different approaches and levels of commitment to the market-led research strategy. I have the feeling that this is also not the best type of meeting to discuss this type if issue and reach closure. I would therefore suggest that this type of discussion is done via a sub-committee. So, again 3 out of 10.

Task 6 Discuss how the activities within the network and the network as a whole, should be monitored according to specified targets and performance indicators.

This was not debated and again this will be done via other meetings and in consultation with the donor.

Task 7 Development the guidelines for the research proposals. The most important aspect being that the guidelines should direct the respondents towards the "market oriented" objectives of the networks, and not simply to fund work with is of interest of individual partner agencies.

I feel we did a good job on this with a good deal of input from all round the committee, so I would give this a 9 out of 10.

10 November, 1999

Task 8 Review the guidelines and elect a sub-committee to review proposals. This group should meet in first quarter of 2000.

This was done and a set of candidates has been prepared for the sub-committee, Tick.

Task 9 Elect members for the second steering committee. To meet in November 2000

A set of candidates has been nominated and proposed to ASARECA. These names will be reviewed by the next ASARECA CD.

Task 10 Review training needs.

This was discussed briefly and discussions on this can be finalised via the email. Basically I think that the types of training suggested fits well with NETWORK requirements.

Task 11 Initiate discussions on how networks can work together to attain EU funding in competitive grant scheme and access other funding opportunities.

Not discussed decided to defer to the next SC meeting in 2000.

Task 12 Discuss ideas for inclusion in the information system to strengthen cross-cutting linkages.

This was done in terms of what information was needed. My impression was that this discussion will take place in the next meeting when people can discuss what is actually available rather than what should be.

Annex 1 Members of the first interim FOODNET Steering Committee meeting

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Annex 2

FOODNET Interim Steering Committee Meeting

ILRI Campus, Nairobi, Kenya
November 8-10, 1999

Agenda and Programme

Sunday, November 7

Delegates Arrive

19:30 Welcome meeting at the Hilton Hotel

Monday, November 8

09:00 Welcome and opening remarks
Godwin Ndossi, Interim Chairman, FOODNET Interim Steering Committee
Dirk Vuylsteke, IITA Regional Representative
S. Ferris, FOODNET Coordinator
Official opening by Dr. C.G. Ndiritu (KARI)

Session I: Introduction to the FOODNET framework
Chair: Chairperson Rapporteur: V. Hagenimana

9:15 Protocols for the establishment and development of FOODNET
Professor G. Mrema

9:30 Background and goals of the sessions *(SC to gain ideas regarding the framework*
D. Vuylsteke, IITA-ESARC *this means the area of work and partners)*

9:40 The FOODNET Strategy *(Two aspects Market analysis and*
S.Ferris FOODNET *Enterprise development)*

10:05 The Agribusiness approach *(Research to Private sector)*
Clive Drew – Agribusiness Development Centre

10:30 Coffee Break
Chair: Chairperson Rapporteur: G. Ndossi

10:45 Taking technologies to the target communities *(Research to stakeholders)*
Rita Laker – Appropriate Technology

11:15 The role of Nutrition in Research A case study *(How to integrate nutrition with Market*
V. Hagenimana CIP *driven research)*

An overview of needs and strategies from the Networks (5-10 mins each)

11:45 EARRNET J. Whyte
11:55 PRAPACE B. Lemaga
12:05 ECABREN M. Pyndji
12:15 BARNESA E. Karamura
12:20 AFRENA K. Attakrah

Discussion

1:00 Lunch

Session II

2:00 Introduction to the working group sessions

General introduction to clarify any issues

Working group 1

Session for devising a plan for the FOODNET market research
Each group should select a chairperson and a rapporteur and a person to present findings.

Task to discuss and outline a practical scheme for prioritising market survey work by crop, country, location and likely partners. Discuss and devise a tentative outline for first 12-18 months. Discuss possible budgets and expected timeframes. Please also see data provided on crop production / country.

Groups will be split according to commodity base **(see last page for grouping and checklist)**

(1) Cassava, sweet potato, Irish potato and bananas
(2) Beans, maize sorghum, millet, pigeonpea, groundnuts
(3) Others, including higher value commodities, oil seeds, meat, dairy

3:30 Coffee Break

Session III

Working group 2

Session focus on enterprise development
Each group should select a chairperson and a rapporteur and a person to present findings.

Task to discuss and outline a practical scheme for prioritising enterprise development programme, where possible linked to market research or ongoing work in the region. Again priority should be by crop / product, country, location and likely partners. Discuss and devise a tentative outline for first 12-18 months. This should include possibilities for training and transfer of technologies.

5:30 Close

Tuesday, November 9

Chair: *Chairperson* ***Rapporteur: D. Vuylsteke***
Session IV
Reports back from the working groups
Session to include both reports on Marketing and Enterprise development
9:00 Root, tubers and Bananas
9:30 Grains
10:00 Other
Discussion

10:30 Coffee Break

Session V
Performance indicators for projects and Network

10:45 USAID/REDSO's Performance Indicators, and what is expected from the networks **John Mullenax, Agricultural Advisor, USAID/REDSO**

11:00 Performance indicators for market chains and sub-projects being used by PRAPACE (micro-indicators) **B. Lemaga PRAPACE**

11:15 Market information and macro indicators **S.Ferris FOODNET**

11:30 What are appropriate indicators? A brainstorming session **Peter Ewell, CIP**

12:30 Lunch

Session VI
1:30 Recommendations for guidelines to fund research projects
(discuss task for groups to split topics or do all?)

(1) How to call for project proposals media, via email??
(2) Size of grants in terms of finance
(3) Options for annual or yearly funding
(4) Funding allocations decisions on (%) across the three main areas (roots, grains, other)
(5) Linkage requirements to networks, IARCS, NARS, NGOs, UNIs?
(6) Minimum indicator requirement at project level
(7) Reporting guidelines for projects, timeframe
(8) Funding mechanisms and financial reporting guidelines
(9) Other

3:30 Coffee Break

Reports back from the working groups
Chair: Chairperson Rapporteur: R. Laker
Topics 1-3
Topics 4-6
Topics 7-9
General discussion

5:00 Close

Wednesday, November 10
Session VII
Chair: Chairperson **Rapporteur: E Karuri**

9:00 Synthesis outline for sub-project guidelines
Rita Laker to provide a resume for the guidelines
9:15 Selection of candidates for "sub-committee to approve projects in Year 1"
Timetable for announcement and start up
9:30 Selection of candidates for approval from ASARECA for second steering committee meeting

9:45 Training
Open session on training needs
List and rank types of training required (language issue?)
Regional, in-country training by FOODNET, by other Networks

10:00 Additional funding
Strategy for EU funds or other sources
Linkage of FOODNET and other networks
Are there clear gaps that should be filled
Which project areas need to be developed in short term.

10:30 Coffee

Session VIII

11:00 Information systems
Define needs regarding
- Market information
- CD ROMS
- Website information
- Newsletters
- Calendars of events
- Linkage with other networks on website

11: 45 Closing of the meeting.
IITA D. Vuylsteke
USAID D. McCarthy
KARI C.D. Ndiritu

12:00 Lunch

Annex 3 The FOODNET Planning and proposal design team.

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Annex 4 Crop priorities based on a Rapid assessment of market potential

			Market		+ Low, ++ Medium, + High
Products	Local * ongoing	Regional + potential	International - Low option	Niche	Growth / Emerging market
1. Roots & Tubers:					
-Starch	**	**	+	+	++
-Alcohol	**	**	+	+	+
-Flour	**	**	-	+	+++
-Bakery prods	**	**	-	+	++
-Chips (dried)	**	**	**	**	++
-Feed	**	+	-	+	++
-Dried leaves	**		+	**	+
-Fried chips	**	**	**	**	+++
- Extruded Pds	**	**	-	**	+++
2. Cereals:					
-Flours	**	**	+	+	+
-Bread	**	**	-	-	++
-Chapatis	**	-	-	-	+
-B/fast cereals	**	**	+	+	++
-Alcohol	**	**	+	+	++
-Feeds	**	**	?	?	+
-Extruded prods	**	**	_	_**	+++
-Pops	**	-	-		+
-Cooking oil	**	**	?	+	++
1. Legumes:					
-Flours	**	**	+	**	+
-Dhal	**	**	-	?	++
-Weaning foods	**	**	-	**	++?
-Extruded prods	**	**	-	-	+++
-Cooking oil	**	**	-	-	++
-Feed	**	**	-	-	+
-Protein conc.	-	-	-	-	+
-Milk	-	-	-	-	+
-Soy coffee	**	-	-	-	+
-Tempe	?	?	-	-	+
-Composite flour	**	**	-	-	+++
-Soysauce	-	-	-	-	-
-Soy cheese	-	-	-	-	-
4. Animal Products:					
Dairy products	**	**	-	+	+++
Meat products	**	**	+	+	+++
Hides & skins	**	**	**	+	+++
Poultry prods	**	**	-	+	+++
Fish products	**	**	**	+	+++
Feed	**	?	-	-	++
Waste products	**	**	-	+	++
5. Fruits & Vegetables:					
Juices	**	**	**	+	+++
Jams /preserves	**	**	**	+	++
Dried fruits	**	**	**	+	+++
Wines	**	-	**	+	++
Dried vegetables	**	**	**	+	+++
Wastes	**	-	-	-	-
Oils	**	**	+	+	++
	**	**	+	+	++
6. Forest Products/Tree crops:					
Honey & prods	**	**	**	+	++
Mushrooms	**	**	**	+	++
Herbs/spices	**	**	**	+	++
Gums	**	**	**	+	++
Meds / P drugs	**	**	**	+	+++
Coffee	**	**	**	+	+
Tea/green/blackCoconut / prods	**	**	**	+	+
	**	-	**	+	++
7. Oil crops:					
Oil	**	**	+	+	+++
Butter/marge	**	**	+	+	++
Soap	**	**	+	+	+
Feed	**	-	+	+	++

Annex 5

Summary of Progress for FOODNET activities funded in 1999

Topic	Funding agency	Partners	Progress in 1999
Bridging funds to coordination unit	USAID	IITA	Bridging funds received, REDSO then proposed to fund FOODNET
Market analysis for starch Uganda	IDRC	NARO, CIP, Matilong, VNCP, Uni NBO	Project completed, report available
Market sub-sector analysis for cassava in Uganda	USAID, DFID, NRI, NARO	NARO, NRInt, NRI, EARRNET	Project initiated 40% complete
Marketing information service in Uganda	USAID	FEWS, NARO, ADC, Min Fin, Ind	Project initiated, data collection being made available to policy groups and Radio
Marketing information service for producers and traders in Uganda	CTA	CMIS, FEWS, NARO, ADC, Radio Uganda, Min Fin, IFCD	Project in preparatory stages
Sub-sector analysis for cassava in Tanzania and Kenya	USAID	KARI, Uni NBO, TARO, TFNC, SARRNET, EARRNET	To be developed with SARRNET /TARO and KARI / EARRNET
Supply of root crops processing equipment	IITA / CIP	EARRNET, PRAPACE, SARRNET	Equipment being sold in Uganda, Tanzania, Rwanda, Angola and Malawi
Crop quality analysis	USAID/CIP/US AID/		Ongoing activity in collaboration with EARRNET
Newsletter	IITA / GTZ	PhAction members	First newsletter published
Linkages with PhAction / intercentres		FAO, CIRAD, NRI, ACIAR, GTZ, CIAT, CIP, IRRI, IITA,	This is a new global forum which aims to promote postharvest research.
Linkages with InPHO	IITA - FAO		FOODNET will serve as a regional node for INPHO and will seek to disseminate information to regional partners
Intercentre Marketing course	IARCs Networks	CIP, IITA, ICRAF, Networks	To be held from 22-27 November 1999

Annex 6

Launching of a global post-harvest forum

A new global post-harvest forum was officially launched on 25th June 1999 at the Natural Resources International headquarters, Chatham, UK. P*h*Action was established through discussions between members of the *Group for Assistance on Systems relating to Grain After harvest* (GASGA) and five International Agricultural Research Centres*.

The role of the new forum will be to raise the profile of post-harvest research and development and accomplish greater impact in the post-harvest sector. This will be achieved through the development and delivery of innovative post-harvest systems in collaboration with a range of public and private sector partners, in developing countries. By fostering better links between farmers and markets P*h*Action will enhance rural livelihoods and secure access to safe food supplies for all.

The forum seeks to expand the level of representation by including major regional research bodies, key NGOs, agribusiness centres and entrepreneurs to gain a more global membership and include partners with a range of skills that are required to meet the post-harvest challenges into the next millennium.

For further details contact Rick Hodges R.J.Hodges@gre.ac.uk or Albert Bell albert.bell@gtz.de at the PhAction secretariat. Forthcoming information and announcements will be released through the INP*h*O website http://www.fao.org/inpho/ and through a dedicated P*h*Action newsletter, which will be published in September 1999. To receive this newsletter contact s.ferris@imul.com.

*** GASGA** members include the Australian Centre for International Agricultural Research (ACIAR), Centre de Co-operation Internationale en Recherche Agronomique pour le Developpement (CIRAD), Food and Agriculture Organisation (FAO), Deutsche Gesellschaft für technische Zusammenarbeit (GTZ) and Natural Resources Institute (NRI).

*** International Agricultural Research Centre** members include Centro Internacional de Agricultura Tropical (CIAT), International Potato Centre (CIP), International Food Policy Research Institute (IFPRI), International Institute of Tropical Agriculture (IITA) and the International Rice Research Institute (IRRI).

Annex 7

METHODS FOR ANALYSIS OFAGRICULTURAL MARKETS IN EASTERN AND SOUTHERN AFRICA

22-27 November 1999, ICRAF House, Nairobi, Kenya

Centres of the Consultative Group on International Agricultural Research (CGIAR), in collaboration with the regional network of the Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA), are offering a short training course: **Methods for analysis of agricultural markets in eastern and southern Africa**. The goal of the workshop is better understanding and knowledge of agricultural marketing—in keeping with the new ASARECA strategy for market-driven research. Such knowledge is critical to the development and successful diffusion of new agricultural technology and in efforts to raise rural incomes through increased and more effective market integration and the development of small to medium-scale agro-enterprises.

COURSE OBJECTIVES

The general aim of the training course is to develop the skills of researchers within the national agricultural research system (NARS) and in other organisations involved in agricultural marketing research. Specifically, this will involve the following

- Familiarising participants with standard methods for analyzing agricultural marketing in developing countries
- Presenting participatory methods for identifying and evaluating market opportunities for small rural producers
- Providing hands-on instruction in these methods in both the classroom and the field
- Offering feedback on on-going and/or proposed marketing research
- Familiarizing participants with on-going marketing research, including that of the participating CG centres and NARS in the region
- Briefing on funding opportunities for market-oriented research
- Practice and feedback on developing concept notes for research projects.

TRAINING MATERIALS

Course content will be based on three publications:

Scott G. (ed.) 1995. *Products, prices and people: Analyzing agricultural markets in developing countries*. Lynne Reinner

Wheatley C., Scott G., Best R., Wiersema S. (eds) 1995. *Adding Value to Root and Tuber Crops: A Manual on Product Development*. International Center of Tropical Agriculture (CIAT), Cali, Colombia.

Carlos F. Ostertag, 1999. *Identification and evaluation of market opportunities for small rural producers*. CIAT, Cali, Colombia

Participants will receive a copy of each publication prior to the course.

The course facilitators have contributed to the course texts and other training materials and have extensive experience in conducting and facilitating research on agricultural marketing and markets.

PARTICIPANTS

Trainees will be people likely to be involved in marketing research after the course. Those who have had some training in economics or the social sciences will have an advantage. Some basic familiarity with computers is useful, but not essential.

Pre-requisites for the course

Prior to the course, all nominees will be expected to submit a brief report about the marketing of some commodity in their country. This report will be presented during the course and may be ONE of the following.

- A draft report of research results in progress
- A desk top assessment of current marketing practices for a particular commodity and proposed solutions to be examined in subsequent research
- A draft project proposal to conduct marketing research on a particular good or level in the marketing system (including sections on background and justification, objectives, methods, and expected outputs)
- A brief review of the available literature on the marketing of a specific commodity in their country of origin

The report should be at least 5 pages in length (not more than 15) and accompanied by overhead transparencies (not more than 3) for presentation purposes.

CONDITIONS FOR PARTICIPATION

All nominations MUST be supported by the employing institutions.

Participation will be confirmed only after a nominee submits an acceptable report. Reports must reach ICRAF not later than 29 October 1999.

The sponsor CG centre will meet the training, travel, accommodation and subsistence costs for each participant.

For more information about this course, contact:

Janet Awimbo
Training Officer
International Centre for Research in Agroforestry
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Annex 8

Rural Agro-enterprise Development Course

Planned dates in October 2000 / February 2001

Introduction
Recent years have seen significant changes in the focus of rural and agricultural development. Today, multiple objectives are the norm: increasing production of food and agricultural raw materials, poverty alleviation/eradication; preservation of the natural environment. At the same time, many countries have started processes of economic reform aimed at opening the economy to global trade, which has made necessary the adoption of measures to improve productivity and product quality, in order to increase competitiveness in national and export markets.

Faced with these changes, small scale agriculture has survived, and continues to play an imporrant role in the production of agricultural goods. This role will increase if links between rural producers and markets (local, regional, national andexport) can be strengthened. Rural agroenterprises, as a mechanism for matching agricultural production with market needs, will take and ever more important role.

This course, the first of its kind, will present a conceptual framework and a series of methodologies and tools that will permit the participant to improve decision making with regard to rural agroenterprise development, within the context of sustainable agricultural development at micro-regional level.

Course Objective
Contribute to the strengthening of institutional capacity in the design, formulation and implementation of research and development projects that integrate the components of production, postharvest/processing and marketing in an enterprise context, with the aim of linking small farmers with growth markets and motivating preservation of natural resources.

Duration
2-3 weeks
Location
IITA, Kampala, Possible siting with KARI Postharvest Programme

Language
English

Participating institutions
FOODNET, Centro Internacional de Agricultura Tropical, CIAT, Rural Agroenterprise Development Project (Natural Resource Management Division). Others who buy into the programme.

University of Valle, Cali, Colombia. Specialization in Rural Agroindustry Development,
Faculties of Social Science and Economics, Engineering y Administration Science.

Proposed partners
ASARECA Networks, IARCs, IDEA Project,

Admission requirements
Academic experience: Batchelors degree required, related to rural development. .
Experience: two years of experience in government nor non-governmental institution associated with rural sector activities.

Costs
registration: US$ To be determined

food and lodging US$
insurance: US$
international travel to course: paid by participant

Note: the inscription covers the cost of instruction, reference materials, study visits and local transport.

Scholarships

1. Complete grants.

X complete scholarships offered by Organization of American States and ICETEX to citizens of member countries. These cover costs of international travel, registration, board and lodging, medical insurance.

2. Partial grants

??Due to the limited number of total scholarships, candidates can apply for partial financial support, which covers 75% of the registration costs. ??

Course Program

Module 1.

Rural context: of the rural poor and agroenterprises; changing economic models (free market, globalization) and their impact on rural society; causes and effects of degradation of natural resources; organization and community participation towards a strategy for management of these resources. Role and current contribution of rural agroindustry, and a vision for its future development.

Module 2.

Sustainable development at micro-regional level: through discussion and analysis of case studies, presented by invited speakers and course participants. The fundamental principles and criteria for the deisgn of sustainable development programs at micro-regional level , with emphasis on the incorporation of an agroenterprise component.

Module 3.

Rural agro-enterprise systems: integrated productive chains, market intelligence, support services (management and administration, credit, technical assistance, training etc), prioritization of portfolios of investment and research projects.

Module 4.

Integrated Agro-enterprise Projects: collection and analysis of information, participatory planning of projects, technology search and selection strategies; participatory development of technologies with users; feasibility studies for pre-investment projects; measurement of adoption and impact; enterprise organization for the implementation of agroenterprise projects; design and formulation of research and development projects.

Time allocation in the course:

lectures and classwork	50%
studies and field visits	20%
group work on projects	30%